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Robert H. Richards

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ROBERT HALLOWELL RICHARDS

I have been asked to write this short article in commemoration of the fortieth anniversary of the beginning of Professor Richards's service with the Massachusetts Institute of Technology, to express in some degree our appreciation of his work and its results, not only for and in direct connection with the Institute, but also apart from this in the fields of mining engineering and metallurgy, to all of which he has been equally devoted during these twoscore years.

The time I have had for preparation and my lack of familiarity with much of his life and work prevent my being able to do full justice to the subject, but, so far as I am able and so far as I do know, I can and do testify to the great value of his performance, and to the debt which we, as students, and the profession at large owe him for these years of service.

"If I were asked," said an associate of many years, "what has been most distinctive and conspicuous in Professor Richards's career, I should say that it was his intense devotion to the Institute." This is undoubtedly true, and the interest in his life and the appreciation of his work should by no means be confined to the students and graduates of the mining and metallurgical courses. Entering the Institute with the first of its students in February, 1865, in his twenty-first year, after an unsatisfactory and, in fact, dishearten-

ing educational experience in the then almost universally classical courses, scientific studies and technical work opened for him, as he himself says, "the beginning of a new life." The work in the laboratory, in the field, the lectures on the natural sciences, then so new as subjects of instruction, were like "the opening of windows to permit of wide vision over the ripening harvest of knowledge." The exhilaration of these studies aroused an enthusiasm not only for the subjects themselves, but for the development of the future of the institution with which they were so closely welded, and which was then fighting its way into recognition. Thus, immediately after graduation, he accepted a position of assistant in chemistry, and successively, during subsequent years, was instructor in chemistry, professor of mineralogy and assaying, and in 1884 professor of mining engineering and metallurgy. But his activity during these years was not by any means wholly indicated by the titles of these positions which he held. The Institute's existence and growth were far from easy, many obstacles had to be overcome, hard times had to be passed through, hard problems had to be solved, and in all of these he assisted. Thus, in the late seventies, Professor Richards assumed the duties of Secretary of the Institute in addition to his work of instruction, and discharged the tasks of these several positions with energy, patience, and devotion during a time of great need.

Professor Richards's lectures in mining and allied subjects were to me always interesting, and impressed themselves by their thoroughness and the evidences of care in their preparation. And such qualities, as expressions of the conscientiousness of the man, had, and always must have, a great influence upon the student. His patient and painstaking example has always remained with me since my student years, as a stimulant to further endeavor when discouraged by failure,

as a check upon impulsive action and rash conclusion. These personal qualities of a teacher are sometimes of more importance to the future career of the student than are the actual subjects studied, and the successes which have been attained by many of his graduates have, I think, been in no small part due to these qualities of our mentor.

The laboratories of mining engineering and metallurgy of the Institute were the first of their kind in the world, and have been the model for many others since established. Their development has been almost entirely due to Professor Richards, and are an achievement of which he may well be proud. Their usefulness primarily for instruction cannot be disputed: they offer the opportunity for "doing things," and the act of doing things is in itself a most important part of education. As Professor Richards himself expresses it, "a thing done which is good enough to stand on its own feet is a victory and a source of strength. If it is a failure and cannot stand on its own feet, it is a lesson one never forgets." But, in addition to their value as instruments of instruction, these laboratories have been perhaps equally valuable as aids in the investigation of milling and metallurgical problems. It was in these laboratories that some of the first investigations were made of the treatment of ores of the Calumet & Hecla Mine, and the contributions of that company, I believe, aided at least in the first equipment of the laboratories. Since then ores from many mines of many parts of the country have been tested and treated, and many graduates and other engineers have made use of the equipment for the testing of ores or of processes, the results of which work have led to the successful operation of many mines and mills. Thus the usefulness of these laboratories has not ended with the instructing of the pupil, but the engineer of later years has come back to make use of the old

tools, and, in return, has assisted in renewing and improving them. Therefore an acknowledgment which Professor Richards would especially like to make is the part his old students have played in making it possible for him to develop the Institute laboratories.

Professor Richards was associated with the first summer school of mining in 1871, and has maintained and developed them ever since. Their value as means of instruction was very great. They afforded opportunities for students to see how things were actually done, they strengthened the ties between teacher and pupil, they introduced the student to managers of mines and works, which frequently lead to subsequent employment, they showed the latter that the student was a useful sort of person, and could be trusted.

The product of the teacher is the student or graduate: the accomplishment of the latter is a test and measure of the former. The wide scope of the work, the high standing of many, and the successes his students have accomplished in the fields of mining and metallurgy are especially a source of gratification to Professor Richards, and redound greatly to his credit. The students of the mining engineering and metallurgical departments to date who have gone out into the world must number fully six hundred. Of these by far the greater part are in the practice of their professions or allied branches, and fully one hundred and thirty occupy leading places, and of these as many as forty have attained especial prominence. Among the latter may be included such names as Henry M. Howe, of the class of '71, Charles W. Goodale, of the class of '75, Walter R. Ingalls, of '86, Thomas C. DuPont, of '84, Frederick H. Newell, of '85, and many others.

During the many years of his professional life, and notwithstanding his activities at the Institute, Professor Richards

has done much important work for the advancement of other enterprises. As early as 1868 he was engaged in assaying for the Calumet & Hecla Mining Company, and he has continued to serve that company to a greater or lesser extent ever since. His years of principal service, however, were between 1878 and 1888, and since that time his relations with the company have been more in consultation at irregular intervals. Mr. Alexander Agassiz, in speaking of Professor Richards's services, says that his work was principally for the development and improvement of the mill, especially immediately after the fire of the early eighties. This work, Mr. Agassiz says, resulted in important increases in saving, especially in the recovery of values from the tailings through the development of the slime plant, and in improvements in smelting methods. The later growth of the mill and smelting plant have been in a large part along lines laid out by Professor Richards, and in furtherance of his original suggestions, with the improved means available in later years.

Professor Richards has further acted as consulting engineer in the ore dressing mill of the Pennsylvania Steel Company at Lebanon, and has served in a similar capacity for the Sulphur Mines & Railway Company of Virginia. At the Longdale Iron Works in Virginia he introduced hydraulic classifiers. He is on the staff of the Firth, Sterling Steel Company in connection with the concentrating of their wolfram deposits in Boulder County, Colorado, and he has served the Boston & Montana Company of Great Falls, Mont., in connection with their concentrating plant, and also the Eustis-Pyrite Mine in Quebec. In 1905 he spent the summer at Portland, Ore., working, in connection with Dr. David S. Day, for the United States Geological Survey on an investigation of the black sand deposits.

The results of this work were of value not only directly

to those employing him, but also in widening his own field of work, and in making him thereby of greater value as an instructor. The outcome of his work in other fields is embodied partly in a large number of publications, a list of which is appended to this article. Further results are expressed in various inventions upon which he has been working intermittently for many years. Particular attention has been given to classifiers, and his classifiers and pulsators have been installed in many places, and their use appears to be increasing. These investigations included not only the necessary practical calculations for large installations, but also many theoretical studies, the results of which have been put into literature. He has at all times, during the past few years, had one or more private assistants engaged on this work. As developments of this line of work, he has made the following inventions: a Suction Filter Pump (described in the *Chemical News* in the early '70's); a Jet Pump (described in the transactions of the A. I. M. E. in the early '70's); the Calumet Classifier (patented in the '80's); a Sieve Jig (patented in the '80's); a Stadia Prism (patented in the '90's); and a Hindered Settling Classifier, a Pulsator Jig, and a Pulsator Classifier, the last three all patented in 1908.

But the greatest single product of Professor Richards's life-work is his well-known work on Ore Dressing. This is the most exhaustive American treatise on the subject, and for thoroughness and usefulness is not surpassed by any other publication. The first edition of this work was published by the *Engineering and Mining Journal* of New York and London in 1903. It comprises over 1,200 octavo pages, and there are incorporated 560 illustrations, many of which are from original drawings. The preparation of this work occupied Professor Richards many years, and it will always remain a valuable work of reference and a monument to his

memory. In addition there are a large number of minor publications on a great variety of subjects,—a list of which is given in the appended bibliography.

Professor Richards is a long-time member of the American Institute of Mining Engineers, and was its president during the years 1886–87. He is further a member of the American Association for the Advancement of Science, the American Academy of Arts and Sciences, the American Forestry Association, the New Hampshire and Massachusetts Forestry Associations, the Massachusetts Cremation Society, the Boston Society of Natural History, the Boston Society of Arts, the Economic Club of Boston, the University Club, and other organizations.

Professor Richards is a member of the Protestant Episcopal Church, and is prominent in its work, and is also junior warden of the Church of the Good Shepherd in Boston. He is also president of the Board of Directors of the Eliot School in Jamaica Plain. He received the degree of S.B. from the Institute of Technology in 1868, and in June, 1908, there was conferred upon him the degree of LL.D. by the University of Missouri.

But beyond these material facts and accomplishments I, and, I believe, all his students and those who really know the man, love and esteem him for his unselfish and gentle nature, for his patience and his forbearance, and for the steadfastness with which he has held to his ideals through life, with all its hard work, its drudgeries, and its disappointments. He has lived serene through them all. To him, as is the case with all others, there must have been much that was irksome in the constant grind of the lecture-room, of the laboratory, of the shop, the mill, and the office. His tastes are nature-loving, and his pastimes are with plants and flowers and camera. He delights to be out of doors, to walk and to

ride through field and forest. His is a vigorous, well-knit frame, which is still fit to share and enjoy the active sports of much younger men. With so much work so well done for so long a time, may the next score years bring to him the well-earned rest and play which will round out and carry his life into serene old age!

ARTHUR WINSLOW, '81.

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ROBERT HALLOWELL RICHARDS 1868-1908

On the evening of Saturday, June 6, there was held at the University Club, Boston, a dinner in honor of Professor Robert H. Richards upon the completion of forty years' continuous teaching at the Institute. Invitations had been sent to past students of the Course in Mining Engineering

and Metallurgy, to the Executive Committee of the Corporation, to the Visiting Committee on Mining and Geology, to members of the Faculty whose appointments antedate the retirement of Professor Richards from the secretaryship, to his department colleagues, and to the classes of '68, '69, and '70; and letters and telegrams had been coming in from all corners of the United States, Canada, and Mexico.

About forty were present at the dinner, and speeches in praise of Professor Richards's work as a teacher, as an organizer of the Course in Mining Engineering and Metallurgy, as a perfecter of metallurgical processes, as Secretary of the Faculty, as first President of the Alumni Association, and, above all, as a man, were made by Mr. Munroe, '82, who presided, by Dr. Noyes, '86, Acting President of the Institute, by Professor Niles, by Colonel Livermore, Mr. Fish, and Hon. Eben S. Stevens, '68, of the Corporation, and by Professor Hofman, of the Department of Mining and Metallurgy. In the course of the evening, extracts were read from a number of the letters and telegrams which had been received, all of them unanimous in their expression of praise and affection. After the reading of these extracts, Mr. James P. Tolman, '68, on behalf of the many donors, presented to Professor Richards a handwrought silver bowl, made by Mr. Forssen, of the Society of Arts and Crafts, and inscribed around the rim, in Roman letters: ROBERT HALLOWELL RICHARDS—MASSACHUSETTS INSTITUTE OF TECHNOLOGY—JUNE, MCMVIII.—FORTY YEARS IN THE SERVICE. In response to this gift Dr. Richards (for he had just returned from receiving the degree of LL.D. from the University of Missouri) responded in a characteristically modest speech, which was received with great favor. The committee in charge of the dinner were Tolman, '68, Munroe, '82, and Morss, '85.

MRS. ELLEN A. KING

Mrs. Ellen A. King, the head of the Tech Lunch for seventeen years, will sever her connection with the Institute in June. A new steam turbine will be installed where the lunch room now is. This, with the moving of the Union into the New Union, makes it unnecessary to have two eating places.

At General Walker's urgent request a committee was appointed to undertake the starting of a lunch room. In the fall of 1890 the Women's Educational and Industrial Union undertook to run a lunch. At the end of the first year this was found to be unsatisfactory and it was decided to place the lunch room under the control of a committee of the Institute. Mrs. King undertook to run it and has run it ever since. In 1898 it was moved from where the mining library and offices in the basement of Rogers now are to its present location.—*From The Tech, April 3, 1908.*

The way to men's hearts is said to be through their stomachs. Tech men belong to the general type, but need further appeal, and must have their minds reached in order to be entirely won. As in all proper adjustment of affairs, supply meets demand, so at Tech the need of some one who would satisfy appetites and stimulate good fellowship was met when Mrs. King was secured, a good many years ago, to preside over the Lunch-room.

Mrs. King has always had the conviction that Tech men require and deserve the very best food that human skill can provide. She has been able to secure such food, and to offer it to the boys at a price rather lower than that of second class food anywhere else. This is remarkable, but it is less important than the second part of Mrs. King's service. She has possessed the rare faculty of creating and maintaining an atmosphere within the walls of the Lunch-room. The coffee houses of London were not more favored. She has

brought together student and teacher in a way most distinctly helpful to both. She has been a constant adviser and foster-mother of infant Tech-boards and class-day committees. There are men all through the land, from California to Maine, who will testify to her sympathy and encouragement to students struggling against severe obstacles at the Institute. Her interest in the students has never been confined to the satisfying of their hunger, but has manifested itself in a keen participation in their higher interests,—a participation almost maternal. Those who know it count themselves fortunate, and the great pity is that those who are now to enter Tech will not realize what is denied to them, for the Lunch-room will not have the same qualities again.

Another article in this same issue of the REVIEW deals with the plans for a new Lunch-room and Union, but it does not describe Mrs. King's last service to Tech, previous to her retirement this spring. When the Institute was embarrassed to solve the perplexing problem of new quarters for this important part of its service to the undergraduates, and had practically decided upon a rather unsatisfactory scheme, it was Mrs. King's wisdom and interest which discovered the present welcome solution of the whole question. So, as Tech loses her direct personal influence, it honors her long and faithful devotion to its interests by committing itself to her suggestion for the future of the Lunch-room and the Union.

WILLIAM ROGER GREELEY, '02.

THE EXETER STUDENT AND HIS COLLEGE

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

[Older alumni will get an interesting glimpse of the Institute, from the view-point of the undergraduate, from the following article, reprinted by permission from *The Phillips Exeter Monthly*, and written by a Junior at the Institute.]

For the Exeter student who seeks to equip himself for an active part in the development and application of science the Institute of Technology offers opportunities that cannot be duplicated. Chartered in 1861 for the "advancement, development, and practical application of science in connection with arts, agriculture, manufacture, and commerce," and opening in 1865 with an attendance of fifteen students, it stands to-day, with its superb faculty, its splendid curriculum, its high standard, and its excellent equipment, as the leading exponent of scientific education in the United States, with a reputation that is international.

The Institute offers four-year courses in Civil, Mechanical, Mining, Electrical, Chemical, and Sanitary Engineering, and in Architecture, Chemistry, Physics, Biology, Geology, and General Science, for the successful completion of which the degree of Bachelor of Science is conferred. For advanced work in graduate courses and original research of a high order the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are conferred. With the exception of the course in General Science and a few minor exceptions, a definite plan of studies is laid out for each of these courses, little besides the selection of a course being left to the option of the student. There can be no doubt that this system has given far more satisfaction than any elective system could have done. In purely academic institutions it has not been proved that the average undergraduate, when left to his own devices, will always select his course with the truest and wisest regard for his own best interests, and the faults of such a system would be enormously magnified

in a school of the scope of Technology. Therefore, having once determined the branch in which he is most interested, the student is confined with a fair degree of strictness to a course based, not on personal whim, dilettanteism, or a regard for ease, but on the educational and professional experience of men who have left lasting impressions on their respective branches of science or engineering.

Such an educational system as has been described has some interesting results. In the first place, nearly every student has chosen a subject in which he is intensely interested, and is following a course that he means to make the basis of the best work of his life. That it is a splendid thing to have a definite goal in view is no less true in a college course than in any other relation in life. Therefore, it is probably true that in no undergraduate body do the members have a stronger realization of their opportunities, a more earnest purpose, or a saner and sounder view of the proper relation between their studies and undergraduate activities than at the Institute of Technology.

Again, the following of a definite line of effort throughout the college course cannot but be a powerful impulse in character-building. It is this fact that gives the degree of the Institute its high value. The possession of a degree represents more than four years of residence, more than four years of fun and friendship, and more than four years of education: it stands for four years of determined application, of repeated endeavor, and of final attainment, and it is improbable that these influences shall not have had a powerful effect on character. It is this fact that makes the degree a testimonial of efficiency wherever scientific education is known.

It is commonly said that a course at Technology produces a man of narrow vision, of poor general education, and of capabilities limited to a single field. That a course which is in large part specialized may have this effect is undoubtedly true; but that it will have this effect on a man with any sense of perspective, with any of the tastes and ideals which a man cannot help gaining at Exeter, cannot be supported. The courses given have as their primary object the establishment of a broad scientific and mathematical basis for an education, the acquisition of the principles upon which

professional work is based, and the training of the mind in proper scientific methods of thought, technical skill being in all cases subordinate to these purposes. But it has always been the firm belief of the Faculty that the most efficient man, the most useful citizen, and the most creditable graduate must possess in addition both breadth of view and education. Since the foundation of the Institute, therefore, it has never been possible to obtain a degree without completing a considerable amount of literary, historical, and economic study. At present, courses in History, English, and Modern Languages are required of all regular students in the first and second years, and extensive courses in summer reading of English literature are required in the vacations following the first and second years. Third-year students are required to take courses in Political Economy and Business Law, and an additional course to be selected from an excellent list, including various branches of Literature, History, Modern Languages, and Economics. That many students do not appreciate the value of these courses, and neglect them to their own detriment, in no wise detracts from their worth. No Exeter man need ever fear that he will graduate at Technology without a firm, broad basis for a thorough education.

The second accusation commonly flung at the Institute is that the undergraduates are a "bunch of grinds,"—that their entire time and energy is devoted to their work; that they miss most of the fun and friendship and outside interest which make so large a part of college life. That this has a basis in truth for many students is but a natural outgrowth of the conditions of student life, the lack of a dormitory system, and the situation of the Institute; but how far it is from the actual truth may be shown by a rapid survey of the various student activities. Though not so numerous or so varied as in many colleges, and though the principal fault of the Technology student society is under-organization, these activities are as numerous and as highly developed as a proper regard for the curriculum would dictate, and the evils of under-organization are not so serious as some of the faults that characterize the highly over-organized student societies of some of our colleges.

The centre of the general social life at the Institute is the Tech

Union. Here, in a few unpretentious rooms, has been the meeting place of classes and clubs for dinners, smokers, reunions, etc., for several years. Great improvements are, moreover, in sight. Already larger and more comfortable quarters for the Union for next year have been obtained, and a large fund has been established by the alumni, to be used, when the permanent location of the Institute is more definitely settled than now, for erecting a large building, to be the home of the social life of the student body.

Other social organizations of less general significance are the fifteen national and two local fraternities, the Freshmen and Sophomore clubs, the Junior and Senior societies, sectional clubs representing many States and sections of the country and some foreign countries, and several preparatory school clubs. Among the latter the Exeter Club is easily the most active. With nearly thirty members, its annual dinners and smokers have been a source of much pleasure to all who have attended them. It is interesting to note that none of these clubs or societies has ever had the slightest effect on the absolute democracy that prevails.

Student publications include *The Tech*, a tri-weekly college newspaper; *Technique*, an annual that ranks among the best; the *Architectural Record*, a quarterly magazine, illustrating the current work of the Architectural Department; and the *Senior Portfolio*.

Among college dramatics, Tech Show ranks very high. The annual Show is written, text and music complete, by Technology students, and sixty or more men are given an opportunity to display talent in male and female rôles. Last year the Show, the book for which was written by an Exeter man, gave two performances at the Colonial Theatre, Boston, one in Malden, and one in Providence, R.I. This year two performances will be given at the Hollis Street Theatre, Boston, and one in Northampton, Mass. The profits of the Show are devoted to the support of athletics.

The Glee, Mandolin, and Banjo Clubs offer pleasant diversion for those musically inclined. Many short trips are taken throughout the year, and two Boston concerts and dances are given annually.

The religious life at the Institute is promoted by a strong, well-organized Young Men's Christian Association, working along prac-

tical lines for the promotion of Christian fellowship and service among the students.

Almost all branches of athletics are represented at Technology. Football and baseball are confined to class teams of the two lower classes, as it is felt that too much time would be required for training 'varsity teams in these sports. But Technology meets other colleges in track, cross-country, basket-ball, fencing, hockey, tennis, and golf, and in spite of the many difficulties connected with training teams the Institute has succeeded in developing an absolutely clean, honest, healthy, and healthful system of athletics.

The social event of the year is Junior Week, occurring in the latter part of April. Together with the Junior Prom, the Show performances, the Musical Clubs' concert, the Technique Rush, and numerous teas, receptions, etc., afford highly prized relaxation, and prove beyond a doubt that Tech is far from being "one dem'd, horrid grind."

Of course here, as elsewhere, are many students who take no part in these activities,—probably more than elsewhere; but among these Exeter men are never found. The appreciation of friendships and associations, of the substantial pleasures and benefits to be derived from "rubbing elbows" with one's fellows, is one of the many valuable possessions that a course in Exeter gives. It has been shown at Technology by the fact that Exeter men have been at all times leaders in every phase of student life. A single instance will illustrate this. In the graduating classes of 1907 and 1908 every Exeter man was elected to the Class Day Committee of twenty-five, and of the three marshalships, the highest class honors, two went to Exeter men in 1907, and one in 1908.

And so to the Exeter man, perhaps more than to any one else, Technology offers the best of training for a fascinating career, an excellent foundation for a broad general education and a sane college life, with enough of pleasure and of work to make both fully worth while.

MAURICE R. SCHARFF, '05 (Exeter); '09 (M. I. T.).

A REQUIRED COURSE IN PHYSICAL TRAINING

It is proposed to inaugurate next year a regular course in physical training for first-year men at the Massachusetts Institute of Technology.

The recognition of physical education as a legitimate part of college training has been growing very rapidly in our American colleges. While in 1900 there were only twenty-one colleges in the United States which were giving credit as a part of their regular curriculum for the work in physical training done by their students, in 1906 there were fifty-seven colleges and universities which demanded such training as a part of the requirements for their degree. Among these colleges may be mentioned Cornell, Columbia, the University of Illinois, Johns Hopkins, Leland Stanford, Jr., Northwestern University, the University of Pennsylvania, and the University of Wisconsin. Among the colleges in our vicinity making this requirement are Amherst, Brown, and Dartmouth. In all of these colleges the requirement is the same for students in the scientific and engineering courses as for those in the academic courses. In most of them participation in athletics is regarded as an equivalent for gymnasium instruction. At Cornell, for instance, work on the University athletic teams is reported weekly to the Director of the Gymnasium. A physical examination is required of all students upon entering the University and at the beginning of each season's training for athletic work.

At the Massachusetts Institute of Technology gymnasium instruction has been provided for many years for those students who cared to apply for it, a competent instructor having been in charge. The old gymnasium on the land of the Boston & Albany freight yard was first employed as a drill hall, and was afterwards used for gymnasium classes and as winter training quarters for athletic sports. When it became necessary for the Boston & Albany Railroad to use the property leased to the Institute, the Corporation of

the latter decided to erect a gymnasium near the Mechanical Laboratories on Garrison Street. This new building was completed in 1906, and is a plain, commodious, well-lighted building, which is used for both gymnastic and athletic training.

At the suggestion of President Noyes members of the first-year class were asked at the beginning of the last school year to present themselves at the gymnasium for a physical examination. This examination was given by Mr. Towne, the Instructor in Gymnastics, to two hundred and seventy-five first-year men. Anthropometric charts were plotted which showed clearly to each student the comparison of his development with that of the normal type of student of his age and height. All students who were found to be below the normal were urged to take regular instruction. Classes were formed, and quite a large number of men started in on the work, but, as the exercise was entirely optional and was not felt by them to be a matter in which the Faculty was interested, the attendance soon began to fall off, and towards the end of the year there were perhaps not more than fifteen or twenty men present at an exercise. Those who did attend gained something from the work, and two of the men were awarded the Cabot Medal for Improvement in Physical Development.

In May, 1908, a committee of the Faculty was appointed to consider the advisability of having some compulsory form of gymnastics for first-year students, and below are given abstracts from their report:—

“It is the belief of the Committee that, if prescribed work in Physical Training should be introduced, it should be based upon somewhat the same educational ground as instruction in General Studies. It is important in the education of an engineer that he understand the relation of bodily health to intellectual activity and the need of physical exercise as a means of maintaining health. In these matters most of the men entering the Institute are comparatively ignorant. . . .

“During the first five weeks of the term five introductory lectures will be given to first-year men. These lectures will include such subjects as the special need of physical training for Institute students;

bodily health and the relation of exercise to health; matters of personal hygiene; and the special value of gymnasium training. During these first five weeks each member of the first year class will be given a physical examination from which an anthropometric chart will be plotted. For the remaining ten weeks of the first term and the first eight weeks of the second term regular periods of gymnasium work will be required. There will then be a second physical examination for the purpose of comparing the physical condition of the student with his condition at the beginning of the year. . . .

"In connection with this course a Standing Committee on Physical Training might well be established, including as *ex-officio* members the Dean, the Physical Director, and the Medical Examiner, and two Faculty members, this Committee having the power to deal with applications for excuse from gymnasium work. Excuse from gymnasium work may well be granted to men over twenty-one years of age (except in special cases); to men living at such a distance from the Institute that the requirement would prove too great a hardship; to men who are taking regular athletic work under the direction of the Coach hired by the Advisory Council on Athletics; and to others who can satisfy the Committee that they are in good condition and taking care of their health by some approved habits of exercise and some intelligent and systematic course in hygiene. Applications from men in the last two classes should be considered individually by the Committee. . . .

"The Committee is of opinion that the regular hours for gymnasium work should be placed upon the tabular view, and that records of the standing of the students should be reported with the other marks at the semi-annual and final examination periods. The ratings might be in terms of Pass, Deficient, and Fail."

After discussion and a modification of some of the minor details the recommendations of the Committee were finally accepted on May 20, 1908. The Faculty intends by this action to emphasize the value of physical training as a part of the education of an engineer.

ALFRED E. BURTON.

A NEW PLAN FOR FIVE-YEAR COURSES

The normal length of the Institute course has been from its foundation four years, and this standard has been maintained by the Faculty in spite of the steadily increasing material for instruction. On the other hand, the number of students who, for one reason or another, devote five years to the completion of the course is not inconsiderable. Even before General Walker's presidency, and later with his active interest, the needs of such students were carefully studied, and five-year courses were laid out in most of the professional departments, the administration of these courses being placed in the hands of a standing committee of the Faculty. In general, the plan involved postponement of chemistry from the first year to the second, and of physics and certain professional subjects from the second year to the third. This plan worked fairly well for some years following its adoption, at least for the larger departments with curricula then relatively simple. On the other hand, any person familiar with the Institute program will readily appreciate that it was a matter of no small difficulty, after the "tabular views" for four-year students were worked out to make the necessary interlocking adjustments for five-year students, who must combine (except in their first and last years) subjects of two or more different years of the four-year program. These adjustments were rarely, if ever, indicated on the printed tabular views. Second-year students occasionally received hints as to how to include first-year chemistry, but beyond this the five-year student was under the necessity of making his own tabular view, which, doubtless, afforded valuable training, but diminished the theoretical time-saving of his plan. Again, the standing committee of the Faculty, after carefully working out a set of five-year course schemes, would find all its results upset by changes in the underlying four-year programs, to say nothing of the endless complications attending transition from an old program to a new one. Still further, a

student desiring to take mining engineering or chemistry—for example—was at a material disadvantage by reason of postponing chemistry. The accumulated effect of these circumstances has come to be, with the increasing complexity and differentiation of the professional courses, the practical atrophy of the whole plan. In recent years, at any rate, students have rarely taken five-year courses voluntarily, and the Faculty provision has proved to be little more than a kindly discrimination in favor of certain relatively deserving, special students desiring to be classed as regular. It is needless to add that, if students had sought to take advantage of the formal provisions of the plan in any considerable number of departments, the consequences in the requirement of additional instruction would have been serious, if not indeed prohibitive.

The new plan recently adopted by the Faculty aims to meet the inherent difficulties of the situation as outlined above, and at the same time to serve the needs, not only of students who wish to take the regular Institute course more deliberately, but also of those who desire to take in addition either the professional work of a second allied department or a larger proportion of general studies. The essential features of the plan are: first, the postponement of any differentiation for five-year students until the beginning of the second year; second, the distribution of the remaining work of the course in question over four years instead of three; third, the offering of definite programs in civil, mechanical, and electrical engineering only, the Faculty committee undertaking to facilitate similar arrangements for students in other departments, without, however, guaranteeing a feasible tabular view.

Some of the advantages of the plan are a somewhat higher standard of scholarship, represented by the requirement of the full first-year work; the restriction of tabular-view difficulties arising from the combination of work of different years to the third and fourth of the five years; the opportunity for the student to test his need of a fifth year by taking full work for one year; and the opportunity during that year to confer with members of the Faculty on the questions involved.

It has been stated already that the new plan is designed to attract students who wish to complete the work of two professional departments or of those who wish to combine with the professional work of one department a larger proportion of general studies. While neither of these tendencies is likely to become very general in the immediate future, both of them are deemed by the Faculty worthy of encouragement. Many a man finds after graduation that personal circumstances, or industrial changes, or the increasing interdependence of different forms of engineering, render it highly advantageous for him to have a wider range of professional training than can be included in a single course. Thus a mechanical engineer may need more electricity, a mining engineer more geology, or a naval architect more mechanical engineering. The need has been met in the past, to some extent, by a graduate spending a fifth year devoted entirely to the professional work of a second department, but this combination of professional subjects normally distributed over a long period within the limits of a single graduate year is often unsatisfactory. Under the new five-year plan a better blending of two allied courses can be planned and carried out from the beginning. Moreover, a student may complete one course and a considerable part of a second, receiving the degree only in the first.

The bearings of the plan on the needs of students who may choose to devote the time gained to a larger proportion of general studies are of more than ordinary interest. In the face of continually increasing professional demands the Faculty of the Institute has resolutely adhered to the policy of making its degree represent a broad and thorough general scientific education, with a moderate proportion of technical studies not too highly specialized. In obedience to this principle all regular students receive substantial instruction in English composition and literature, history, economics, and modern languages, so that the Institute graduate has had a broader education in these academic studies, not to mention the fundamental sciences,—mathematics, physics, and chemistry,—than may be required of candidates for the bachelor's degree in colleges where the principle of free election is dominant. The effect of the new five-year plan for students of

the group under consideration is to enable them to take a considerably larger proportion of these and other elements of general education than is possible within the ordinary four years. Whenever the number of students selecting this plan warrants it, it may also be expected that new courses in such general subjects as the various branches of natural and physical science and in the history of science may be introduced.

H. W. TYLER, '84.

THE NEW "TECH UNION"

In an article on the New Tech Union in the April number of the REVIEW it was suggested that a part of the Grundmann Studio Building might be used. Further investigation, however, showed that, at slightly increased expense, there might be constructed a new building which would far better serve the needs of the students for a general dining hall and meeting place. Therefore, after careful consideration, the Executive Committee of the Corporation decided to erect such a temporary building, provided the main part of the cost could be secured by private subscription.

The work of construction is to begin immediately, and it is hoped to have the dining-room ready for occupancy at the beginning of the fall term.

The space between Pierce and Engineering C is to be entirely covered, and the "Union" is, outwardly, a continuation of the latter building. It comprises two stories, as follows:—

A basement at the level of the present Lunch-room, forming a new lunch-room, large enough to accommodate about 250 diners at a single sitting. The space occupied by the present kitchen and east end of the lunch-room is rearranged to accommodate the new kitchen, store-room, refrigerator-room, and serving-room.

The large entrance to Engineering C on Trinity Place is to be utilized as the main entrance to the new building, stairs going down to the lunch-room and up to the second floor, which is to contain a large lounging-room with fireplace and all the comfortable furnishings and trophies that make a college room attractive, a coat-room, toilet-room, and two large rooms which can be used for committee rooms or dining-rooms, as may be desired, so placed as to be served conveniently from the kitchen below. In case of a demand for further accommodations the gymnasium of the Margaret Cheney Room is available for a small dining-room, and room 11 Pierce for another large dining-room.

Above the lounging-room will be a small mezzanine floor, which will afford room for two or three offices or committee rooms.

These accommodations are calculated to provide for the student a convenient and attractive place for lounging, committee meetings, reading, or studying, for class and society gatherings, and for dinners. And it is hoped to give them, besides, three good meals every day.

WILLIAM ROGER GREELEY, '02.

AN IMPORTANT COMMITTEE ON ENGINEERING EDUCATION

At the last annual convention of the Society for the Promotion of Engineering Education the retiring president introduced resolutions which were adopted by the society, and which invited the leading national societies in the engineering branches to co-operate in the appointment of a Joint Committee to study engineering education. The resolutions invited each of the several societies to appoint two members of a Joint Committee, while the Society for the Promotion of Engineering Education should itself appoint three members. The resolutions pointed out the desirability of making a comprehensive study of the objects and the utilities and the correct ideals of engineering education, and laid upon the Joint Committee the duty of examining into "all branches of engineering education, including engineering research, graduate professional courses, undergraduate engineering instruction, and the proper relations of engineering schools to the secondary industrial schools or foremen's schools." And the resolutions further laid upon the Joint Committee the duty of formulating a report or reports "upon the proper scope of engineering education and the degree of co-operation and unity that may be advantageously arranged between the various engineering schools."

When the resolutions were adopted, it was hoped that this committee might be promptly formed, and that its final report might be made within two years, but such a degree of co-operation between the societies had never before been secured, and it was soon found that an extended period would be consumed in forming the committee. The somewhat onerous duty of bringing the matter to completion fell to the writer on account of his responsibility for the resolutions. The resolutions were adopted on the last day of a convention held during the first days of July, 1907, and the governing boards of the professional societies invited to participate ordinarily have no meet-

ings during the months of July and August. It was also later found that certain societies were not able to act through their governing boards, and the appointments of certain members of the Joint Committee were therefore delayed until after the opening of the year 1908. One of the societies involved held its meeting at which the members were appointed toward the latter part of December, 1907, and the last members were appointed during March, 1908.

The societies invited to join in appointing this Joint Committee are the American Society of Civil Engineers, the American Society of Mechanical Engineers, the American Institute of Mining Engineers, the American Institute of Electrical Engineers, and the American Chemical Society, each of which societies has designated two members to act on the Joint Committee; and the Society for the Promotion of Engineering Education has appointed three members.

The oldest and most comprehensive of these societies is the American Society of Civil Engineers, and its representatives on the Joint Committee consist of two eminent past presidents, Mr. Desmond FitzGerald who is chairman of that society's Committee on Engineering Education, and Mr. B. M. Harrod. The American Society of Mechanical Engineers appointed two very distinguished members: one a past president, Mr. Frederick W. Taylor, and the other Dr. Alexander C. Humphreys, president of Stevens Institute of Technology. Two past presidents, who are men of great distinction in the mining and metallurgical fields, were designated on behalf of the American Institute of Mining Engineers,—Professor Henry M. Howe and Mr. John Hays Hammond. Two past presidents were likewise appointed by the American Institute of Electrical Engineers: the recently retiring president, Professor Samuel Sheldon, of the Brooklyn Polytechnic Institute, and Mr. C. F. Scott, who is notable as having been an originator of the plan which resulted in the gift of a million and a half dollars for the building for the engineering societies in New York. Mr. Scott is a member of the special Educational Committee of the society which he represents. The American Chemical Society appointed two men who take an untiring interest in educational affairs: Professor Henry P. Talbot, of the Massachusetts Institute of Technology, and Mr. Clifford Richardson,

of New York. The society for the Promotion of Engineering Education appointed Professor C. L. Crandall, of Cornell University, Professor James M. White, of the University of Illinois, and Professor Dugald C. Jackson, of the Massachusetts Institute of Technology.

The resolutions for the appointment of this Joint Committee seem to have been particularly timely. Considerable discussion of the merits and demerits of engineering education has recently been running through the engineering fraternity, and it has entered into the meetings of the professional engineering societies. The best friends of the engineering schools have exhibited a good deal of discontent with the results accomplished,—vaguely expressed discontent, to be sure, but only to be met by a positive and frank effort to find means for improvement. The American Society of Civil Engineers appointed a special committee to study the problems of engineering education at its last annual convention held in July, 1907, at the City of Mexico. This committee was appointed as the result of a letter ballot of all the members of the society, which was taken in response to resolutions introduced at the annual convention held a year earlier. The American Institute of Electrical Engineers passed resolutions at its annual convention of 1907, proposing the appointment of a committee to study electrical engineering education, almost simultaneously with the convention of the Society for the Promotion of Engineering Education; and various members of the American Chemical Society and the American Society of Mechanical Engineers were discussing and urging the appointment of similar committees by their societies. It is obvious that a Joint Committee representing all the aspects of engineering can be much more serviceable to engineering education, and can make a much more valuable and authoritative report than would be possible for a committee viewing only a single branch of the subject, and that the various committees of circumscribed view might perhaps make reports based on insufficient study, and the net result might be without much advantage to the cause at heart. The now fully formed Joint Committee will have the prestige behind it of all five of the great engineering societies, and will have the advantage of viewing the subject from every aspect in the several branches

of the profession. It will also enjoy the aid of the special committees of the several societies.

Two members of the Joint Committee are also members of the special Committee on Engineering Education of the American Society of Civil Engineers, one being chairman of that committee; and two other members of the Joint Committee are members of the special Educational Committee of the American Institute of Electrical Engineers. Other members of the Joint Committee have been looked up to in their respective societies as representing the best views on education, and have been the centers of the agitation for the appointment of committees on education. It is manifest that the Joint Committee represents the best educational impulses of each of the professional societies.

As illustrating the fact that the leading men in the engineering profession are now coming to give much attention to the problems related to engineering education, it is impressive to observe that the thirteen members of the Joint Committee are all but one mentioned in the book known as "Who's Who in America," and a considerable number of them are named in the compilation called "American Men of Science." Of the thirteen members of the committee, nearly one-half have received the degree of Doctor of Science or Doctor of Philosophy. Three members are graduates of Harvard University; two are graduates of the Massachusetts Institute of Technology; three or more spent a period of graduate study in foreign engineering schools or universities; two members are graduates of or have spent a period of graduate study at Cornell University; and two are graduates of Stevens Institute of Technology. A graduate of Sheffield Scientific School, a graduate of Ohio State University, a graduate of the University of Illinois, and a graduate of Pennsylvania State College complete the representation of the various engineering schools whose graduates compose members of the committee. The committee includes one member of the Faculty of the University of Illinois, one of Cornell University, one of Columbia University, one of Brooklyn Polytechnic Institute, and two of Massachusetts Institute of Technology, besides the president of Stevens Institute.

A number of the members of the Joint Committee appointed by

the professional engineering societies are on the faculties of engineering schools, in addition to the three members appointed by the Society for the Promotion of Engineering Education, but in these instances the men are also consulting engineers or advisers in engineering matters. Several other members of the committee are counted among the most distinguished practising engineers in their respective branches. A balance is thus obtained in the membership which promises a remarkably thorough study of the important questions which lie in the province of the committee, and augurs well for an influential report.

It has been proposed to carry on the work of the committee by holding a series of conferences, including the most notable teachers in the branches related to engineering, even though these men do not have membership in the committee. This would be following a plan somewhat like that so fruitfully used some years ago by the Committee of Ten on Secondary Education which was appointed by the National Educational Association. The committee is expected to spend not less than two years in the study and formulation of its report.

DUGALD C. JACKSON.

THE NEW RESEARCH LABORATORY OF APPLIED CHEMISTRY

One of the purposes for which the Institute of Technology was incorporated, as expressed in its charter, was that of aiding in the *practical application of science in connection with the arts.* This aid it has ever given most generously in the form of its graduates,—men broadly educated along those lines which make for general usefulness. It has also aided in the application of science to the arts through the many contributions which the members of its Faculty have made in the way of the published results of investigations carried on by them.

A more direct though, doubtless, a more limited sphere in which the Institute can apply science to the arts, lies in the organization of a laboratory for research, whose chief function it will be to investigate by purely scientific methods some of the many problems which confront the industries of to-day. A number of the large manufacturing companies have already started such research laboratories for themselves for the study of the problems most directly affecting their own interests. But in the Faculty of the Institute we have a corps of experts such as no one organization can hope to command, whose services in a consulting capacity may be drawn upon for the solution of such industrial problems. It should be possible therefore, by a proper plan, to take up for investigation not only problems of general interest, but also the particular difficulties of individual manufacturers, in such a way that the splendid facilities of the Institute and the expert knowledge and experience of its Faculty may be made to serve most directly the community at large, without in any way interfering with the present work of either.

Such an organization the Corporation of the Institute has recently established, to be known as the Research Laboratory of Applied Chemistry. For the present it will be located in 52 Pierce Building, the large room formerly used exclusively for laboratory work in

Textile Coloring. Its proximity to the Laboratory of Industrial Chemistry will render available for experimental work the very complete equipment of that department and thus avoid a duplication of expensive apparatus. Room 50, Engineering B, will be used as a shop, and will be furnished with a full line of the machines and tools necessary for constructing experimental apparatus. It is confidently expected that in the study of any particular problem no difficulty will be met in obtaining the co-operation of manufacturing concerns, to such an extent that their plants will be available for carrying out the more nearly completed investigations on a scale sufficiently large to determine the ultimate success of the work.

Although it is expected that the work carried on by the Laboratory will deal with the application of science to the arts, it is intended that the problems selected shall be attacked in a fundamental way, and that only the most improved methods of scientific research will be employed in their solution. A few advanced courses and seminars will be given by the members of the research staff throughout the year. The Laboratory will therefore contribute to the facilities for instruction at the Institute, and it is hoped that advanced students of a high grade may be attracted. The REVIEW will in a subsequent number discuss more at length the plans of the Laboratory and the field of research which it will hope to cover.

WILLIAM H. WALKER.

JUNIOR WEEK

"Here we are again back to work, and, as we limp up Rogers steps, after seven days and nights of giddy social whirl, the question is forced upon us whether, after all, Technology isn't gay enough for any one. Tech loosens up seldom, but, when it does, it certainly makes a noise." These opening words of an editorial in *The Tech*, summing up the success of Junior Week, 1908, express adequately and vividly the fact that the week of festivity this year more than reached the standard set by former Junior Weeks.

Owing to the fact that the official vacation came on the first three days of the week, beginning April 20, dates for the various events were somewhat confused, and had to be spread over a period of seven days.

CLEOFAN RECEPTION

The annual reception of Cleofan started the game on Thursday afternoon, April 16, in a way that has not been equalled in years. Its membership includes practically all the co-eds at the Institute. The patronesses were Mrs. Harry M. Goodwin, Mrs. Robert H. Richards, Mrs. Dugald C. Jackson, Mrs. William B. Rogers, Mrs. Thomas A. Jaggar, Jr., Mrs. Charles W. Sawyer, Mrs. Frederick T. Lord, Mrs. Charles A. Stone, Mrs. Stanley McCormick, Mrs. Henry P. Talbot, Miss Susan Minns, Mrs. Francis A. Walker, Mrs. Henry G. Pearson, and Mrs. George Wigglesworth. Miss Minns, Mrs. Talbot, Mrs. McCormick, and Miss Ruth Maxwell, president of Cleofan, received.

"TECHNIQUE, 1909"

Two hundred and fifty men from the different classes engaged in the free-for-all fight and rush for *Technique*, 1909, behind the Art Museum on Saturday, April 18, at 1.05 P.M. The first twenty copies contained the signature of President Noyes on the fly-leaf,

and were numbered in gold on the cover. Hundreds of spectators, including many guests, thronged the surrounding streets and filled the windows of the Engineering Buildings.

J. H. Ruckman, '10, emerged from the fighting mass of men with the first book under his arm, and was quickly followed by G. T. Glover, '08, H. J. Ruggles, '08, P. R. Powell, '08, and C. H. Campbell, '09, with the remaining four of the first five copies, which were given free of charge. The other men to receive numbered copies were R. W. Parlin, '08, R. W. Ferris, '08, L. W. Thurlow, '08, A. Hague, '10, A. K. Huckins, '10, F. M. Heidelberg, '09, H. E. Allen, '08, C. E. Creecy, '10, W. G. Harrington, '10, N. S. Seeley, '10, A. H. Curtis, '10, J. F. Davis, '09, B. Barrow, '10, and M. L. Bullard, '08.

With regard to *Technique*, 1909, the following quotations from the reviews written by members of the board of editors of *The Tech* are quoted.

The first, which concerns itself with the literary part of the book, was written by Channing Turner, '08, and Henry W. Hoole, '08, and says:—

Distinctive from cover to cover *Technique*, 1909, is a year book that will stand separate from all previous books for its excellent cover, typography, paper, and many original features. The first impression given by the volume is that here is a *Technique* which comes up to the standard of those published by 1903 and 1904. This impression is weakened as some of the faults appear upon turning the pages; faults which, however, in greater part are not due to any carelessness or ignorance on the part of the board, but rather to the engraver and printer together with the smallness of the editorial force.

Throughout there is a great variance in method of paging, makeup, and general arrangement, passing from high excellence to the poorest sort of book-making. Page after page is carefully laid out, with one interspersed so poorly arranged that it spoils the general good effect. In greater part the typography is of the quality usually associated with the name "University Press," but there are places where the alignment is extremely poor, and the type used is not either in taste or good form.

That the book contains some eighty odd pages more than last year's

Technique is hard to believe, for the volume is much thinner, due to the thinness of the paper. The paper itself is of a high finish that brings out in a beautiful manner the half-tone cuts, engravings, and color cuts, a great improvement over that used last year. . . .

The book opens with a dignified dedication to Arthur Amos Noyes, Acting-President of the Institute, with none of that high-strung, frenzied manner that has so characterized dedications of previous *Techniques*. The photogravure of Dr. Noyes is good, a perfect likeness. The life of Dr. Noyes is well written, with emphasis on the essentials, and well worth the reading of every Tech man. *Technique*, 1909, was fortunate indeed to have such a man to whom the book could be dedicated.

The first and finest piece of literary work in the book is the Foreword. Surrounded by a frame in perfect accord with the words, the whole page voicing the spirit of the best Technology, this Foreword is worthy of more than passing attention. It follows:—

“To thee, O Tech, we raise our hearts!
We know thy griefs, thy joys, thy moods
As sons alone thy ways can know.
Then help us, Tech, now to record
The year that's passed, the time that's flown,
So that thy loyal sons may own
A treasure book of memories dear
In which they may when aged gray
The past in fond remembrance see
And in their life's autumnal day
Be young again, O Tech, with thee.”

In looking over the book after the examination of the details, the feeling still remains that 1909 *Technique* is a good book. Its faults are glaring, but not so great in number as in the past three *Techniques*. As in the case of the art work, the faults are intensely bad, rather than numerous. *Technique*, 1908, was almost a good book, while that of 1909 is a good book with drawbacks. This may seem indefinite, but to those who know about *Techniques*, that of 1909 can be placed in the class with that of 1905, while the 1908 *Technique* has two faults, the cover and the paper, which thoroughly spoiled it. The 1909 board is to be congratulated in this regard, the makeup of the volume giving a very good impression, while the cover and tint and texture of paper are excellent and distinctive.

The criticism of the art work, by W. Fred Dolke, Jr., 1908, says in part:—

The art work of *Technique*, 1909, as a whole, gives an impression of being highly original in its ideas—much more so in many ways than is true of former *Techniques*. But this originality has unfortunately been fatally ruined by faulty execution in the case of many of the drawings and by poor color in cases where the drawing is excellent.

In many headings the idea expressed is original and extremely interesting, but the execution is rough and coarse to the point of grammar school art, the effectiveness and the pleasing qualities of the design being consequently lost.

That this is true is unfortunately over-emphasized by the startling contrast that exists between the first few pages of the book and those that follow, this contrast being again brought forward by the excellent color plate for the "Finis" of the book. In general, throughout the book, a drawing is good or it is very bad. . . .

In spite of all the faults evident in the execution of the drawings, the art editors of *Technique*, 1909, are to be congratulated on the manner in which they have boldly and courageously been original in many of their ideas. It may be that this very originality leaves a bad impression as to the standard of excellence of the art work, but it is evident, after a careful and thorough survey of the book, that the designs which are truly original in conception are best in execution.

Much of the art work that is poor is due, no doubt, to the fact that the art editors worked under the great handicap—a handicap felt in this department possibly more than in any other except the business—of the lack of time which disorganization of the board at the beginning of the year occasioned.

MUSICAL CLUBS' CONCERT AND DANCE

In the most successful concert in years the combined Glee, Banjo, and Mandolin Clubs covered themselves with glory on Monday evening, April 20, at the New Century Building. The programme was cleverly carried through, and every number offered was encored to the echo. The matrons were Mrs. C. Frank Allen, Mrs. Harry E. Clifford, and Mrs. Dugald C. Jackson. Gardner, Coleman,

Sharp, Hield, and Caldwell made up the reception committee. The ushers were C. W. Radford, '08, head usher; Ralph Walters, '08, C. J. Belden, '09, W. McN. Schofield, '10, W. J. O'Hearn, '10.

TECH SHOW

With a swing and a dash that was surprising when it is considered that the players were amateurs, the performances of this year's Tech Show, "Over the Garden Wall," at Northampton, Mass., Saturday evening, April 18, and at the Hollis Street Theatre, Tuesday and Thursday afternoons, April 21 and 23, were carried through in a manner seldom seen in other than professional productions. The hits were made by Rinker Kibbey, '08, as "Professor Buggs," just escaped from the Danvers Asylum, C. C. Hield, '10, as "Bob Wilmerdine," the hero, in his various songs, and S. A. Malcom, '09, as Bob's uncle.

Of Kibbey's work Mr. Greenough, dramatic critic of the Boston *Transcript*, said:—

Mr. Kibbey's crazy Professor Buggs is a creation which deserves to take rank with William Norris's Partridge in "Tom Jones." Kibbey, in fact, has many of Mr. Norris's quaint characteristics. His make-up was perfect, his conception of the character truly comic and admirably displayed. He took the part at just the right tempo, brisk, impetuou[s]s, ever reaching forward in search of "The Eternal It." There was a laugh in every line of his one freakish utterance. He sang his one song effectively, and his dancing was as droll and original as that of Norris and the late Dan Daly combined. The professional stage could make rare use of Mr. Kibbey.

For the first time in years there has been a real story to the Show. It had been thought that by a plot the sprightliness of the Show would be destroyed. G. C. Westervelt, '08, the author, Coach Francis, and the principals have disproved this theory. "Over the Garden Wall" has its disconnected specialties, dances and songs, connected by a story with an interest of its own. The local hits were few in number, but fine in quality.

As showing the drift of Tech Show towards an ideal Technology production, the following quotations are made from the review written for *The Tech* by Professor H. L. Seaver, of the English Department:—

It is a pleasure to review one's impressions of an amateur performance so good that it stands well any general comparison with others in a long series of creditable Tech Shows. That of this year does not seem to me to fail of the high standard set in previous seasons. In some details earlier shows have been better, in a few others this sets, I think, a new standard, though no show has yet, I am sure, found all the fun that might be derived from a performance of this kind. . . .

The book of the show has—wisely, we must all agree—not departed from the traditional show plan,—and by a “show” I mean a performance without any dramatic pretensions, but a thread of story upon which to string solos, duets, choruses, jokes, and dances which may give the widest chance to any and all the talents to be discovered in the entire undergraduate body. That more could be made of the story,—“plot” would be, perhaps, too pretentious a word,—I still believe; much amusement might be got from the simplest complications of surprise and misunderstanding. These elements would call, I think, for no capacities of acting more than our principals could supply; yet no libretto of any Tech show yet has resorted to either, to increase the amusement or tie up snugger the whole merry jumble of separate “features.”

The scene chosen by the libretto is, also wisely, local; yet only nominally so. To keep to familiar scenes means a great advantage in the greater possibility of natural acting,—as witness Mr. Schofield's Freshman of two years ago; but the books of the later shows, which have so well avoided extravagancies of setting, haven't taken advantage of the opportunities for local burlesque. As far as satirical or “topical” amusement is concerned, the present “Fraternity house on Newbury Street” might as well have been in the moon; and when the stage set appeared of the “Street in Brookline,” I almost expected to see Sir Henry Irving's marvellous Jew harrying his merchant to the jail in Venice. In the dialogue and in the songs, similarly, little was given of locally comical significance,—the “Professor's” song being, perhaps, the nearest approach. (Not so good, by the way, as that idyllically misconceived lyric of the undergraduate Muse named “Petition the Faculty,” in an earlier show.) The enthusiasm of delight and applause that welcomed the few pleasantries about the local restaurants or street

scenes or Institute teachers shows how grateful more of that kind of fun would be to an audience mainly of Technology people, very ready to laugh and to be laughed at.

JUNIOR PROM

The Junior Prom was held on Tuesday evening, April 21, at the Hotel Somerset, with four hundred dancing. Dancing began shortly after nine, and lasted until supper at 11.30, after which it was resumed until 3 A.M. The matrons were Mrs. Curtis Guild, Jr., Mrs. Samuel J. Mixter, Mrs. William T. Sedgwick, Mrs. George Wigglesworth. The patronesses were Mrs. J. L. Batchelder, Mrs. A. E. Burton, Mrs. F. W. Chandler, Mrs. H. E. Clifford, Mrs. Desiré Despradelle, Mrs. D. C. Jackson, Mrs. J. P. Munroe, Mrs. Dwight Porter, Mrs. Geo. F. Swain, Mrs. Henry P. Talbot, Mrs. Frank H. Rand.

This year's Prom committee was composed of Carl W. Gram, Alton Dickerman, Charles J. Belden, Chester H. Pope, Walter W. King, Raynor H. Allen, and Arthur L. Shaw.

ARCHITECTS' RECEPTION

Thoroughly Bohemian in its clever, original decorations, the Architectural Society reception and exhibition on Wednesday, April 22, in Pierce, was a great success.

Greeting the guests on their arrival was a clever poster, saying, "You are on the Right Road to the Architects' Reception," and other cartoons and sketches helped them upstairs. At the top was a cartoon of "Herr Professor" Despradelle and a sketch of a goat's head with the advice—"Butt In."

Around the drawing-rooms were placed architectural drawings illustrating the work of the different classes, livened up by some humorous sketches and large silhouettes of the Seniors in the department.

The guests were ushered into the architectural library by the reception committee,—Kurt Vonnegut, '08, R. J. Batchelder, '08,

C. I. Youngman, '08, Rinker Kibbey, '08, J. M. Hatton, '08, and A. M. Menke, '09. The matrons who received at one side of the library were Mrs. William Barton Rogers, Mrs. Henry P. Talbot, Mrs. Allen H. Cox, Mrs. Harry Goodwin, Mrs. Stanley McCormick. On the other side of the room Miss Helen McGraw Longyear, '09, and Miss Rebecca Hall Thompson, '09, poured tea. After the reception some of the guests stayed to an informal dance.

W. FRED DOLKE, JR., '08.

SENIOR WEEK

Senior Week, 1908, will undoubtedly go down in the history of the Institute as a red-letter week, owing to the innovations made in the part of the programme which more especially affects the alumni. The reception given by the alumni to the members of the graduating class was this year done away with, and the class given a more glorious reception than usual at Tech Night at the "Pops." Also the customary class dinners on graduation day were changed to class spreads, all given in the Hotel Brunswick. The 1908 men were guests at these spreads, and a greater opportunity was given for the alumni to meet one another.

SENIOR DINNER

As has been the custom in former years, the annual Senior Dinner at the American House, Thursday evening, June 4, inaugurated the Senior Week festivities. Unlike former years, however, the graduation notices were not given out at the dinner, and the speakers were all members of the class. After the dinner almost the entire party, headed by some of the more enthusiastic members on the top of a cab, marched to Rogers steps, where a few of the graduation notices, which had been secured from the Back Bay post-office, were given out.

Samuel H. Daddow acted as toastmaster. Professor Breed was discovered in the hotel in the course of the evening, and was carried bodily into the banquet hall, where he made a short speech. Harry Rapelye, the class president, and John Tobin, who was elected class secretary, both boomed the Alumni Association and the REVIEW. The other speakers were Harry Webb, Arthur S. Douglass, Lafayette B. Hedge, Basil L. Gimson, Horace E. Allen, Francis H. McGuigan, and Herbert T. Gerrish.

MUSICAL CLUBS CONCERT

On Saturday evening the Glee, Banjo, and Mandolin Clubs gave a concert to the Seniors and their friends in Huntington Hall. An excellent programme was furnished, and the members performed exceptionally well, each number being encored several times.

BACCALAUREATE SERMON

That the aim of the members of the graduating class on entering the world should be service to others, and that they should use their influence always for the good of the community, was the theme of the baccalaureate sermon delivered by the Very Rev. Dr. George Hodges, dean of the Episcopal Theological Seminary, Cambridge, in Trinity Church, Sunday afternoon. The text was from St. John xvii. 19, "For their sakes I sanctify myself." Dr. Hodges said in part:—

I purpose to speak on the subject of influence, because you are all fitted to be influential, you are all resolved to be as influential as you can. I take for my particular theme the elements of influence. I mean the qualities which make men influential for good. It is my purpose to consider in several details that which we intend when we speak of sacrificing ourselves. For their sakes, in order that we may be useful citizens of the kingdom of God and effective contributors to the happiness and excellence of society, what sort of persons ought we to be?

There are two primary things that concern influence. First come the determining elements, whether it is for good or for evil; and, second, the effective elements, which make it either strong or weak. The force of influence necessarily depends on the person exerting it. The world is looking to the college man of to-day to exert a great influence for good, and it is depending on him to do the right thing.

Something more than righteousness and holiness are essential to good influence. The man who is devoutly religious and thinks of nothing else than his religion has almost no influence for good. Practicability in the form of sympathy and helpfulness are needed.

Members of the class of 1908, we want you to be influential persons.

We greet you in the hope that you are going to reinforce the powers which make for betterment. We expect you to be useful citizens. That is what you are educated for, and any usefulness which is of large account includes the service of society. For our sakes you are to sanctify yourselves. By the determining elements of righteousness and holiness you are to make your influence good. By the effective elements of ability, of sympathy, or both together, you are to make your influence strong. To this high mission we bid you welcome in the name of God.

CLASS DAY

To the accompaniment of fluttering fans on one of the hottest days Class Day has ever experienced, the Seniors celebrated Class Day, 1908, in Huntington Hall on Monday afternoon. The class president, Harry A. Rapelye, opened the exercises, and unveiled four new sections of the Huntington Hall frieze, executed this year by the fifth-year students in architecture under the direction of the life-class instructor, W. Felton Brown, and made possible by a decennial class gift from 1895. Herbert T. Gerrish, as first marshal, presided at the exercises. The historian and statistician, Kurt Vonnegut, compared the course at Tech to a game. He likened the Faculty to one team and the students to another. The object of the class was to score as much as possible by getting a large number across the goal line of graduation. With the class of 1908, 229 scored, and received the degree of Bachelor of Science. Twelve Master's degrees and three degrees of Doctor of Philosophy were also won.

The class started the course with 298 members, but only 36 per cent. of those who are graduated were from the original number. The others come from other colleges or from former classes at the Institute. The average age of the class is 22 years 10 months and 4 days. The oldest is 32, and the youngest 20. The tallest man measured 6 feet 4 inches, and the shortest man 5 feet 4 inches. The average is 5 feet 10 2-5 inches. The average weight is 149 pounds. Half the men admit they drink occasionally, and 53 per cent. smoke. The feminine members were not questioned. 42 per cent. of the

class wear glasses, which, said the statistician, testifies to their hard-working propensities.

At the request of the Institute authorities, information was gathered concerning the number of men who work during the summer. In the vacation following the first year, 24 per cent. worked for ten weeks; in the second, 50 per cent. worked; and, in the third year, 51 per cent. were industrious.

The class prophecy shared honors with the president's introduction as the best exercise of the day. Basil L. Gimson was the seer selected by the class. He started his talk in a most original way, being transported a decade hence by inhaling the fumes of a mystic substance in the chemical laboratory.

Francis H. McGuigan, as presentation orator, after relating the characteristics of various members of the class, presented them with appropriate gifts. The star of these was a black pickanniny carried on the stage in a large box. This lady was given to George Glover to make up for the trips to Revere Beach that he would lose upon his departure from Boston.

The class oration was delivered by Joseph G. Reid. He talked on the duty of the engineer in society and civic life. He called attention to the narrowness of student life at the Institute on account of the great pressure of work and the lack of a comprehensive social relationship. He pointed out the absolute need of versatility to a successful man. The recreation or avocation chosen, if it were politics or civic activity, would bring men into touch with other men, and would afford a means of meeting men in things they were interested in.

The class gift to the Institute was presented by George T. Glover. He said:—

The class of 1908 has always taken the greatest interest in Institute affairs, and, now that we are leaving the sphere in which we once had an active part, it is our desire to leave behind something which may prove of service to those who come after us and which may be a reminder of the life of our class at Technology.

A few months ago a movement was started to secure a new Union for the use of the students. The plan came from a growing appreciation of the

necessity for more social intercourse between the fellows here. Our class has desired to record its entire sympathy with this plan, and help it along in any way possible.

The privilege has fallen to our class of taking the first step toward the realization of this project. We are therefore leaving as our gift for the lounging-room of the new Union a large round table and chairs. We hope this will be in some slight way expressive of the interest in the welfare of Technology taken by the class of 1908.

After the exercises were over, the members of the class and their guests went down on the lawn between Rogers and Walker to partake of the class spread.

The class day committee, which occupied the stage and had charge of all the arrangements for the day, was made up as follows:

Horace Ethan Allen, Maurice Everett Allen, Henry Washington Blackburn, Clifford Hall Boylston, Langdon Coffin, Samuel Harries Daddow, Raymond Edward Drake, Leslie Burton Ellis, Winthrop Drew Ford, Herbert Thurston Gerrish, Charles Alphonsus Gibbons, Jr., George Thummel Glover, Lafayette Boyd Hedge, Bernard Shepard Leslie, Francis Harrington McGuigan, Jr., Thomas Whitley Orr, Harold Smith Osborne, William Joseph Pierce, Joseph Pope, Harry Andrew Rapelye, Joseph Gilman Reid, Leavitt Weare Thurlow, John Theodore Tobin, Kurt Vonnegut, Harry Webb, Edgar Irving Williams.

SENIOR DANCE

Nearly one hundred couples attended the Senior dance in Copley Hall on Monday evening, and in spite of the heat enjoyed a very pleasant evening. The cool promenade on Clarendon Street was much in use between dances.

GRADUATION EXERCISES

The programme at the graduation exercises was simple, as has been the custom, and consisted of the reading of abstracts of theses

in eleven courses, the president's address, and the awarding of degrees.

To three men was given the degree of Doctor of Philosophy, to twelve that of Master of Science, while two hundred and twenty-nine had conferred upon them the degree of Bachelor of Science.

The Seniors who read abstracts of their theses, together with the courses they represent, are: Civil Engineering, Howard B. Luther; Mechanical Engineering, Langdon Coffin; Mining Engineering, Bradford B. Holmes; Architecture, Edgar I. Williams; Chemistry, Rufus W. G. Wint; Electrical Engineering, Edmund L. Warren; Biology, Laurence T. Walker; Physics, John H. Locke; Chemical Engineering, Clarence W. Clark; Sanitary Engineering, Donald H. Maxwell; Naval Architecture, Maurice E. Denny.

President Noyes said in part to the graduates:—

The Institute, far more than the academic college, lays stress upon scientific studies as an essential part of a liberal training. It has no sympathy with the idea that a man can be considered broadly educated, whatever his knowledge of the classics or history or literature, who is entirely ignorant of the chemical composition and properties of the materials he daily deals with; who knows nothing of the elementary principles of mechanics, heat, light, and electricity which are constantly involved in the daily experiences of modern life and in almost all industrial operations; who looks nightly into the heavens, or observes the forms of land or water, sees the seasons come and go, watches the tides rise and fall, without knowing or caring to know the explanation of these phenomena. The Institute holds that a training in physical and natural science, though not the only essential part of education, is yet the chief factor in imparting a true culture and an adaptation to the affairs of life. . . .

*Members of the Graduating Class,—*I desire first of all to extend to you the hearty congratulations of the Corporation and Faculty on the accomplishment of the result for which you have successfully striven. You are to be congratulated not so much because the diploma which I shall soon have the pleasure of presenting to each of you certifies to the completion of a prescribed course of study and to the acquirement of much liberal and professional knowledge, as because it implies the possession and development of certain qualities of mind and character which are fundamentally essential to the highest success in life,—a willingness to subordinate the pursuit of

pleasure to the fulfilment of duties, a determination to accomplish in spite of difficulties whatever has been deliberately undertaken, an integrity of mind which will not contentedly accept as final imperfect or inexact results. The award to you of the degree implies, too, that you have formed sound habits of work that cannot fail to be of prime importance to you in your subsequent careers; for, while the Institute curriculum is not so exacting as to preclude a reasonable participation in the affairs of student life, yet it demands that time and effort be economically expended. There has been here no opportunity for that undue predominance of the physical and social activities over the intellectual which characterizes the student life of many colleges. As a former president said from this platform to a former graduating class, you are not now required to do what is implied in that ominous phrase, "turning over a new leaf." It is not now necessary for you to close a collegiate period of idleness or frivolity or dissipation with good resolutions of improvement for the future and with a determination now taken for the first time to pursue your work with seriousness of purpose and with the aim of high accomplishment. You have taken these resolutions long ago, and have already developed the qualities necessary for their fulfilment, else you would not be here to-day. It is only necessary for you to continue in the way that you have thus far pursued....

With your graduation there comes upon you an entirely new obligation. Thus far you have been only developing your own powers. You are now called upon to use those powers for the service of your fellow-men. Your scientific training imposes on you a special obligation, because it opens to you special opportunities. You can render important kinds of service which other men cannot render. You are to play a part of peculiar responsibility in our great industrial and commercial system. You are not to deal directly with its financial and mercantile aspects, but you are charged with its improvement and further development through the introduction of scientific methods and principles....

Your training thus opens to you an unusual opportunity for service to the community. And *service* is the keynote of the spirit of this twentieth century....

The question for each of you is, therefore, How can you render the greatest service? If you follow this as your guiding principle, you need have no fear of failure in your life-work, even if it be judged from such other standpoints as the attainment of happiness, or of public recognition, or of personal influence.

He then, on behalf of the Corporation, presented the diplomas of graduation, as follows:—

DOCTORS OF PHILOSOPHY

George Alonzo Abbott, Charles Angus Kraus, Edward Wight Washburn.

MASTERS OF SCIENCE

Roland Barney Anthony, Frederic Gallup Coburn, Waldo Putnam Druley, Paul Henry Fretz, Edwin Graham Kintner, George Moir Johnstone MacKay, Edward Leyburn Moreland, Roy Warren Ryden, Armen Haigouni Tashjian, Alexander Hamilton Van Keuren, George Conrad Westervelt, Frank William Willey.

BACHELORS OF SCIENCE

Civil Engineering.—Robert Clifford Albro, Lawrence Howe Allen, Maurice Everett Allen, Monroe Ames, William Edward Barton, George Myron Belcher, Clifford Hall Boylston, Arthur Edmund Bremer, Claude Osgood Brown, Mortimer Perry Burroughs, Frederick Arthur Cole, Chester Simmons Colson, Hardy Cross, Henry Hyman Damon, Allston Dana, Stephen Lock Davidson, Arnold Truman Dean, Gregory Mumford Dexter, Gustavo Adolfo DuBois, Raymond West Ferris, Benjamin Greely Fogg, Herbert Thurston Gerrish, Gardner Sabin Gould, Wheaton Ira Griffin, Harold Wiley Griswold, Philip Jewett Hale, Julian Herbert Hunter Harwood, Robert David Hennen, Howard Bourne Luther, Stephen Chandler Lyon, Francis Harrington McGuigan, Jr., Rolando Arnoldo Martinez, William Durant Milne, Archer Corbin Nichols, Thomas Whitley Orr, Eugene Vorhees Potter, Charlton Dascom Putnam, Henry Jason Ruggles, Edward Michael Savage, George Schobinger, Charles Henry Shapleigh, Edward Richard Smith, Henry Vose Spurr, John Theodore Tobin, Freeman Eugene Towle, Ernest Joseph Hill Waters, Mason Tuxbury Whiting, George Dilley Whittle.

Mechanical Engineering.—Horace Ethan Allen, Robert Corson Angell, Robert Alexander Angus, Carl Henry Bangs, John Stetson Barnes, Frank Kennedy Belcher, Henry Washington Blackburn, Francis Marvin Bond, Kenneth Camm Boush, John Cummings Brooks, Philip Carter Brown, James Merrill Burch, Jr., Walter Evans Caldwell, Hendley Ross Callaway, Harold Leston Carter, Burton Wolcott Cary, Leslie Phelps Cassino, Dana Wright Clark, Lawrence Addison Clark, Clifford Nelson Cochrane, Langdon Coffin, Abraham Saul Cohen, Richard Carter Collins, Samuel Harries Dad-dow, James Howard Dennedy, Herbert Seton Eames, Charles Ashton Edmonds, Harold Cushing Faxon, Winthrop Drew Ford, Ferdinand Jacob Friedman, James Thomas Gallagher, Basil Lovibond Gimson, George Thummel Glover, Irving Morse Guilford, James Ellis Hale, Carl Albe Hall, Edward Rymes Hall, Carl Emil Hanson, Samuel Frink Hatch, William Roy Heilman, Clarence Loring Hussey, Stiles Fraser Kedy, Karl Raymond Kennison, George Cooper Lees, Bernard Shepard Leslie, Leo Loeb, Arthur Ashleigh Longley, Harry Chester Lord, William Joseph Pierce, Paul Rulison Powell, Harry Andrew Rapelye, John Randolph Reyburn, Miles Sampson, Joseph Blair Sando, Albert Terence Scannell, Clarence Herbert Spiehler, Charles Mullen Steese, James Martin Talbot, Joseph Warren Wattles, 3d, Rudolph Boynton Weiler, Masanao Yendo.

Mining Engineering.—Walter James Emmons Barcus, Ygnacio Safford Bonillas, Alexander Henry Bradford, Kenneth Gordon Chipman, Arthur Olaf Christensen, Leon Arthur Dickinson, Paul Revere Fanning, Victor Max Frey, Charles Alphonsus Gibbons, Jr., Nelson Simpson Hammond, Paul Harold Heimer, Bradford Buttrick Holmes, Clarence Ronald Lamont, Jesse Worth Maxwell, Desaix Brown Myers, Alec Newton Penny, Harry Patterson Sweeny, Tsok Kai Tse, Ching Yu Wen.

Architecture.—Mabel Keyes Babcock, Ralph Johnson Batchelder, Harry Howe Bentley, Chalmers Stevens Clapp, Russell Gilbert Crane, William Frederic Dolke, Jr., Howard Spencer Hazen, Jr., James Allen Kane, Rinker Kibbey, Hugo Franz Kuehne, Paul Willard Norton, Clifford Hamilton Preston, Frank John Robinson,

Frederic Becker Schmidt, John Rodney Tabor, Aram Torossian, Kurt Vonnegut, Edgar Irving Williams, Conrad Youngerman.

Chemistry.—John Starr Coye, Raymond Edward Drake, Clifton Nathan Draper, Paul Albert Esten, Ernest George Genoud, Arthur Thacher Hinckley, Warren Winchester Karnan, John Angus Kydd, Charles Lewis Lufkin, Emerson Fletcher Lyford, James McGowan, Jr., Frank Earl Mott, Everett Hiltz Newhall, William Chittenden Taylor, Leland Edward Wemple, Rufus William George Wint.

Electrical Engineering.—Viggo Edward Bird, William Peet Bixby, Wilfred Edwin Booth, Donald Bowman, Harry Wheeler Brown, Benjamin Bullard, Harry Lancaster Burgess, Rae Willard Davis, Herbert Lawrence Fletcher, Jacob Alger Fottler, Floid Merrill Fuller, John Clarence Gaylord, Lynn Sumner Goodman, Lee Hagood, Joseph Woodwell Ledwidge Hale, Lucius Felt Hallett, Matthew Cowden Hayes, Lafayette Boyd Hedge, Oliver Saunders Jennings, Ernest Edwin Kilburn, Charles Collins Kinsman, André Theodorovitch Kolatshevsky, Frederick William Lyle, Ralph Eric Manning, Gardner Armstrong Murfey, Utar James Nicholas, Harold Smith Osborne, Harry Chapman Patten, Alfred Griffin Place, Edward Ashby Plumer, Walter Everett Poor, Joseph Gilman Reid, Harry Frederic Richardson, Edgar Percival Slack, Alexander Caffee Sloss, Jr., Warren Daniel Spengler, George Edward Tolman, Edmund Leon Warren.

Biology.—Eugene Clarence Howe, Scott MacNutt, Edward Joseph Tully, Laurence Tidd Walker.

Physics.—John Harold Locke, Rens Edward Schirmer.

Chemical Engineering.—Alfred Bennett Babcock, Howard Edwin Batsford, Harry Stuart Chandler, Clarence Warner Clark, Chesney Harrison Criswell, Rufus Coffin Folsom, Arthur Livermore Gardner, John Gianella, Jr., Harold Peaslee Gurney, Maurice Trimble Jones, Jr., Eleazar Myers, Henry George Nicholas, Francisco Damaso Reyes, Leavitt Weare Thurlow, William Hervey Toppan.

Sanitary Engineering.—William Cumner Folsom, Donald Hebard Maxwell.

Naval Architecture.—Maurice Edward Denny, Edmund Francis Heard, Joseph Pope, Carroll Dame Steele, Loyd Hall Sutton.

After the exercises the audience had the pleasure of attending a reception by the Acting President in the Library of the Rogers Building, and of inspecting the various laboratories where interesting machinery and processes were on exhibition.

ALUMNI SPREAD

The entire east wing of the Brunswick was given up, from five-thirty to seven-thirty, on Commencement Day, to the alumni, a general spread being served in the largest room, and the separate classes having headquarters, with punches, in the various smaller rooms. About 450 were in attendance, and the exchanging of courtesies and the visiting of class to class made this new plan of celebration a pronounced success.

TECH NIGHT AT THE "POPS"

After the spread at the Brunswick the classes marched in more or less regular formation to Symphony Hall, where each class as it arrived was escorted to the tables assigned to it. The balconies were crowded with ladies, and when '86 came in, escorting the Acting President, and when, last of all, '08 marched in through the centre of the hall, they were showered with confetti and paper ribbons thrown from the balconies.

Owing to careful preparation in advance and discreet management during the evening, the noise was kept within bounds, cheering was confined almost wholly to the periods between the musical selections, and the Tech songs were sung with a harmony and volume quite unusual. This diminution in the uproar permitted a general exchange of greetings and conversation that made the evening thoroughly enjoyable.

GENERAL INSTITUTE NEWS

THE CORPORATION

The three hundred and twenty-second stated meeting of the Corporation was held on the afternoon of June 5. Appointments and promotions made by the Executive Committee were confirmed, as follows: Arthur A. Blanchard, Assistant Professor of Inorganic Chemistry; Alpheus G. Woodman, Assistant Professor of Food Analysis; Ervin Kenison and Harry C. Bradley, Assistant Professors of Drawing and Descriptive Geometry; Hervey W. Shimer, Assistant Professor of Palaeontology; Joseph C. Riley and Charles W. Berry, Assistant Professors of Mechanical Engineering; Harrison W. Hayward, Assistant Professor of Applied Mechanics.

Reports were presented from several of the Visiting Committees. Degrees were then conferred upon 244 candidates, as follows: three for Doctor of Philosophy, twelve for Master of Science, and 229 for Bachelor of Science.

The Master's degrees were distributed among the courses as follows: Architecture, 1; Chemistry, 1; Electrical Engineering, 3; Naval Architecture, 7.

Bachelor's degrees were distributed among the courses, as follows: Civil Engineering, 48; Mechanical Engineering, 61; Mining Engineering, 19; Architecture, 19; Chemistry, 16; Electrical Engineering, 38; Biology, 4; Physics, 2; Chemical Engineering, 15; Sanitary Engineering, 2; Naval Architecture, 5.

The names are printed elsewhere in the REVIEW.

The Acting President announced the following gifts: \$5,000 from the John C. Haynes estate; \$1,000 per year for three years from Mr. Charles W. Hubbard for assistance in establishing a Research Laboratory of Applied Chemistry; \$500 from Mr. Guy Lowell towards a travelling scholarship in the Department of Architecture; \$200 from the Caroline A. R. Whitney estate for the benefit of

women students of the Institute. He also announced the discontinuance of the office of Secretary of the Institute, and the creation of a new official to be known as President's Assistant. He stated, moreover, that the following gentlemen of the Corporation had been appointed a committee on the social and physical welfare of students: Messrs. Wigglesworth, Stevens, Locke, Copeland, du Pont, Morss, and Bradlee.

On the evening preceding the formal meeting of the Corporation a dinner was held at the Hotel Brunswick for an informal consideration of various questions prominently before the Institute. Invitations had been sent to all members of the Corporation and to the members of the Faculty in charge of the several departments. About forty were in attendance, and the entire evening was spent in a general and interesting discussion, mainly upon questions concerning the welfare of the undergraduates and the possibility of closer relations between the Institute and the general public.

CHARLES L. LOVERING

On May 1 Mr. Charles L. Lovering died at his home at Taunton in his seventy-sixth year. He had been a member of the Corporation since March 11, 1896, and had served upon the following committees: Mining and Geology; Literature, History, and Political Economy; Chemistry and Chemical Engineering. Mr. Lovering was a descendant of Colonel Joseph L. Lovering, an English officer who landed at Quebec with General Wolfe. His father, in the early part of the nineteenth century, established in Taunton the cotton mills now known as the Whittenton Manufacturing Company, and upon his retirement these mills and other large enterprises were carried on by Mr. Lovering and his two brothers, the Hon. William C. Lovering and Mr. Henry M. Lovering. The deceased was treasurer of the Merrimac Manufacturing Company, president and director of the American Felt Company, a trustee of the Boston Terminal Company, a director of the Elizabeth Pool Manufacturing Company, a director of the Gosnold Mills Company of New Bedford, treasurer and director of the Massachusetts Cotton Mills, vice-

President of the Massachusetts Hospital Life Insurance Company, treasurer and a director of the Whittenton Manufacturing Company.

THE FACULTY

On recommendation of the Department of Architecture and with the approval of the Departments of Drawing and Mathematics it has been voted "that persons applying for admission as special students in architecture be permitted to substitute for the regular examinations in plane and solid geometry a special examination in geometry which shall be of a somewhat practical character, emphasizing geometrical construction, and, as far as possible, to be a test of fitness for the courses in mechanical drawing and descriptive geometry."

The Committee on Courses of Instruction and on Five-year Courses have been considering the laying out and announcing of definite five-year courses of study leading to the Bachelor's degree. The plan proposed by them, and approved by the Faculty, is as follows:—

"There shall be no deviation from the four-year course during the first year. The remaining three-quarters of the regular course shall be approximately equally distributed over four years, giving an average time allotment of 540 hours in each of the eight terms.

"Definite provision shall be made for the addition of particular elective subjects, and encouragement shall be given to students to take additional work of their own choosing in the time gained by the proposed distribution.

"There shall be definite published schedules, attendance cards, and tabular views.

"A definite programme shall be offered only in those larger departments where a feasible tabular view can be safely guaranteed, and in any publication of the plan a statement shall be made that the Faculty will make every reasonable effort to provide for students in other departments, but that a working tabular view cannot be guaranteed in advance.

"It was voted that the five-year schedule of study shall be pub-

lished in a special circular (not in the programme or catalogue), and that the circular be sent each year to the students in the first-year class and to their parents."

Definite schedules have been approved for Courses I., II., and VI.

Exercises are to be suspended on Friday, November 6, after twelve o'clock noon, for Fall Field Day.

At the annual meeting the following officers were chosen for the ensuing year: A. A. Noyes, Chairman; A. L. Merrill, Secretary; A. E. Burton, Dean. The plan for requiring physical training in the first-year class was unanimously approved by the Faculty.

NOTES

The officers of the Institute and of its alumni will be kept busy during the next few years in planning and carrying out anniversary celebrations. In June, 1909, will be held the Second Tech Reunion, which it is proposed to carry out on even more enthusiastic lines than those of the reunion of 1904; and on April 10, 1911, comes the fiftieth anniversary of the granting, by the legislature of Massachusetts, of its charter to the Institute. While no plans as yet have been made for the latter anniversary, so significant an occasion will undoubtedly be marked by important exercises.

Professor Sedgwick has been appointed one of a commission of four to investigate the causes of typhoid fever in Pittsburg, by Mayor Guthrie, of that city. The expenses of the investigation will be paid out of \$10,000 appropriated by the Russell Sage Foundation.

He was also offered by Mayor Hibbard, but felt obliged to decline, one of the vacancies in the Board of Health.

Professor George F. Swain, head of the Civil Engineering Course, has been appointed by President Roosevelt one of the eleven members of the Inland Waterways Commission.

Frederick H. Newell is also a member of the commission. He holds the position of chief engineer in the United States Reclamation Service.

Dr. William H. Walker, Professor of Industrial Chemistry, was

presented with the Nichols medal by the New York section of the American Chemical Society at their dinner of April 10.

In the new tower that is being built in place of the old stone tower at Blue Hill Observatory, the Institute will install its new seismograph. The tower is being made moisture-proof as far as is possible. When the seismograph is installed, it will be under the charge of the observatory force.

DEPARTMENT NOTES

CIVIL ENGINEERING

Mr. Allston Dana, of the class of '08, has been appointed Instructor of Civil Engineering at the University of Montana. The Professor of Engineering in that university is N. R. Craighill (Course VI., 1894), son of General William P. Craighill, U.S.A., formerly Chief of Engineers, now retired. Mr. Hardy Cross ('08) has secured a position on the Missouri-Pacific Railroad under Mr. Charles E. Smith (Course I., 1905). Mr. Smith now has charge of the bridge work on this system. Mr. H. D. Luther ('08) returns to the Institute as an Assistant in the Civil Engineering Department. Mr. H. T. Gerrish ('08) will join his father in the dredging business. Mr. W. D. Milne ('08) has secured a position with a contractor in Columbus, Ga. Mr. C. H. Shapleigh ('08) has secured a position on the Alabama & Vicksburg Railway. Mr. G. Schobinger has a position in Chicago.

There are some encouraging signs of improvement in the business situation, such as an increasing demand for men and the tone of letters from former graduates. In the case of one of the principal railroads of the country, where salaries were reduced in the engineering department last year, word comes that the old salary list has been restored. In the case of another railroad, upon which all work was stopped last year, work has now been resumed and men are being sought.

ARCHITECTURE

Because of the gift of Mr. Lowell the Department of Architecture is able to announce for the ensuing year a Traveling Fellowship of \$1,000, to be awarded upon the basis of distinguished merit as shown by the results of a competitive design.

CHEMISTRY AND CHEMICAL ENGINEERING

At a recent meeting of the Executive Committee of the Institute it was voted to establish, as a branch of the department, the Research Laboratory of Applied Chemistry. This laboratory is the outgrowth of work, already mentioned in the REVIEW, which has been carried on during the past two years by research assistants under the direction of Professor Walker. The formal organization of the laboratory at this time is directly due to the generosity of Mr. Charles W. Hubbard of the Corporation who has contributed funds for its support, which, together with a part of the income of the Charlotte B. Richardson Fund appropriated for the purpose, will make it possible to continue work on a modest scale for at least three years. The work and courses of instruction which may be given in the laboratory are under the charge of Dr. Walker, who is designated as director of the laboratory; and for the present the researches will be carried on in the room formerly known as the Textile Coloring Laboratory. Mr. W. K. Lewis, a graduate in Chemical Engineering, now studying at Breslau, Germany, will be Research Associate in Applied Chemistry next year, and a second associate will be elected later. Both will probably begin work in September.

It is expected that two classes of problems will be dealt with by this Research Laboratory. The first of these is represented by the work already accomplished and in progress on the causes of corrosion of iron or steel; that is, problems of importance to all engineering industries. The second class of problems which it is hoped to undertake includes special work for individual concerns which they have not the facilities to handle in their own laboratories. There are already indications that this phase of the work will meet a real need on the part of manufacturers, which will serve to bring the

Institute more closely in touch with them, and will also afford an attractive field for advanced work on the part of graduate students and the members of the instructing staff of the Institute in their spare hours.

The laboratory of the Institute and the number of men on the instructing staff of the department who are specialists in various lines and available for consultation make the conditions unusually favorable for such an undertaking; and it is hoped that this may develop into a most important branch of the work of the Institute. The advanced courses of instruction and seminars which it is proposed to inaugurate will also benefit both students and instructors, as has been the case with similar courses in the Research Laboratory of Physical Chemistry.

The following changes will be made in the instructing staff for next year: Messrs. W. W. Kennedy, F. B. Shields, H. W. Mahr, and C. R. Bragdon leave the Institute to enter technical positions. Mr. R. D. Gale and Mr. G. F. White will devote their full time to advanced work for a higher degree, the latter at Johns Hopkins University. Mr. O. L. Peabody will be transferred from the Analytical Laboratory to that of Technical Analysis, Mr. C. L. Nickerson from Inorganic to Analytical Chemistry, Dr. E. B. Spear from Analytical to Inorganic, Mr. R. G. Woodbridge, Jr., from Organic to Analytical. The new assistants are Mr. C. W. Clark, Industrial Chemistry; Mr. H. S. Chandler, Organic Chemistry; Mr. W. H. Toppan and Mr. A. B. Babcock, Theoretical Chemistry.

Dr. Miles S. Sherrill has been obliged to put down active work for a time on account of ill-health, but it is anticipated that he will resume instruction in the fall.

Dr. A. A. Blanchard and Mr. A. G. Woodman have received deserved promotion to Faculty membership, the former as Assistant Professor of Inorganic Chemistry, and the latter of Food Analysis. Dr. W. R. Whitney has been appointed Non-resident Professor of Chemical Research.

Mr. G. W. Rolfe has returned from Porto Rico, and reports a successful season, although weather conditions have been adverse.

Drs. Walker, Fay, and Talbot have each recently visited Sche-

nectady and spoken at a colloquium held at the research laboratory of the General Electric Company under the direction of Dr. Whitney. Dr. Walker has also addressed the New England Street Railway Club on "Chemistry and its Relations to Street Railway Work."

Mr. J. W. Phelan has been made chairman of a committee appointed from the American Leather Chemists' Association for the purpose of systematizing the analytical methods of leather chemists and for introducing uniform standard methods. In conjunction with Mr. P. S. Fiske he has recently published in the journal of the association a paper on "The Acidity of Tan Liquors."

Professor Talbot has been made chairman of a committee of the American Chemical Society appointed to consider ways by which the society can improve its relations to educational work of all grades which has to do with the training of chemists. He is also a member of a joint committee comprising prominent representatives of the various engineering societies to consider and report upon the training of engineers. This committee was appointed at the request of the Society for the Promotion of Engineering Education.

Professor Talbot gave a dinner at the Tech Union on May 10 to the Seniors in Chemistry and Chemical Engineering, which was attended by members of the Faculty of the Chemical Department. The other guests, who were the speakers of the evening, were Dr. William McMurtrie, of New York; Mr. S. W. Wilder, of the Merrimac Chemical Company; Mr. A. D. Little; and Mr. Isaac W. Litchfield. Dr. Walker also spoke of the new research laboratory.

The small number of graduates in chemistry and chemical engineering who have reported themselves as idle on account of business depression is gratifying. The calls for men are fewer than usual, but a considerable portion of the graduates in chemical engineering of the present year are already assured of positions, and some of the chemists are also placed.

The biennial summer course in Industrial Chemistry began June 10. The party numbered twenty-one. An account of this trip will appear in a later number of the REVIEW.

ELECTRICAL ENGINEERING

The dinners of the Electrical Engineering Society, which were referred to in the January number, have been extended during the year to the number of three. The expenses of the first two were paid by gentlemen interested in the progress of the department, and at the third dinner Professor Jackson was the host of the Society.

The first dinner was held on December 5, and Mr. H. G. Stott, of New York, president of the American Institute of Electrical Engineers, was the guest of honor, and spoke interestingly. The second dinner was held on March 5, and Professor Charles P. Steinmetz, of the General Electric Company, was the guest of honor, and spoke. The third dinner was held on May 22, and Professor Elihu Thomson was the guest of honor, and spoke in his very delightful manner. Mr. Stott chose for his subject some of the experiences that arise in the life of a young engineer. Professor Steinmetz chose to talk upon the extent of the field within which electrical engineers may elect their vocations and the influence of electrical engineers on the national life. Following some inquiries, he also spoke briefly about some recent extensions which he has made in the mathematical treatment of the flow of alternating currents in electrical circuits. Professor Thomson took for his subject the early days of electric lighting, beginning with his experiences about the middle of the seventies, when a large dynamo was of a capacity of about five horse-power, and he traced the development for twelve or fifteen years for the purpose of showing the manner of the development of the electrical arts. Each of the talks was of more or less historical and reminiscent character. If it is necessary to know the past to understand the present and to forecast the future, as has been asserted, these talks should do much for the students who are likely to go into the work of developing or managing electrical engineering enterprises. The students found a great deal of inspiration in the talks.

The Faculty has recently been considering a more formal arrangement of the five-year engineering courses. An adopted five-year arrangement which may be followed by Course VI. students will

afford an opportunity for them to extend their study over a greater proportion of the engineering field than is possible in the regular four-year course, or to otherwise bring more collateral study into relation with the electrical subjects. The last three years of this five-year course also make a particularly desirable electrical engineering course for graduates of colleges of liberal arts. At the present time college graduates coming to the Institute to enter Course VI. are ordinarily ahead of the second-year class, but considerably behind the Junior class unless they have used particular judgment in making elections in their college careers. The new five-year course affords these college graduates an opportunity to enter its third year on even terms, and during the following three years at the Institute they will get all the professional work of Course VI., beginning with the subject of applied mechanics, and have the additional possibility of further strengthening themselves by pursuing a portion of the advanced electrical studies which are provided for candidates for the Master's degree.

A particularly fine portrait photograph of the inventor Edison, showing him in bust length and nearly one-half size, has been hung in the electrical engineering reading-room. It was presented for the purpose by Mr. Charles L. Edgar, president of the Edison Electric Illuminating Company of Boston.

A number of the theses of Course VI. students are of particular interest. One of them, carried out by M. C. Hayes, a graduate of Princeton, and E. L. Warren, a graduate of Yale, presents a study of the traffic conditions in the Hoosac tunnel, and shows that that important bore for freight carried between the East and the West puts an absolute limit on the traffic capacity of the railroad passing through it, but suitably replacing the steam locomotives used in the tunnel by electric locomotives would double the capacity of the tunnel. Another one, by W. D. Spengler, a graduate of Adelbert College, and L. F. Hallett, presents a study of the probable increase of suburban traffic on the Boston & Albany Railroad which would result from electrification of the "circuit." Experimental data for a thesis gathered by F. W. Willey, a graduate of Purdue University, and O. S. Jennings, a graduate of Brown University, show the effect

of the frequency of cycles of an alternating electromotive force on the electric striking distance between needle points in air, and concur reasonably well with the table used by the Standards Committee of the American Institute of Electrical Engineers. Very interesting data on the conditions occurring at rupture of an alternating current circuit by separating two electrodes in air are presented in a thesis by E. L. Moreland, a graduate of Johns Hopkins University, and R. B. Anthony, a graduate of the University of Wisconsin. Other interesting theses relate to the action of electric circuit breakers, automatic synchronizers, rotary converters, series alternating current motors, a flaming arc lamp; and to the effect of electric current on concrete, the efficiency of storage batteries, the hauling capacity of an electric switching locomotive, power supply for search-lights in United States coast defences, besides other important subjects. Several theses give the results of the tests of electric plants, including two plants with turbine generators; and in one instance the cost of supplying electric power and light to a factory by an isolated plant is compared with the cost of buying the electrical energy from a central supply company. Another thesis sketches the history of the development of alternating current machinery from 1891 to 1895.

The Faculty has recommended that the degree of Master of Science shall be conferred on three graduate students in Course VI., R. B. Anthony, E. L. Moreland, and F. W. Willey. Thirty-eight students, of whom ten are already graduates of liberal arts courses and three are graduates of the mechanical engineering course of the Institute, have been recommended for the degree of Bachelor of Science in Course VI.

Graduate scholarships for electrical engineering study next year have been granted to Walter S. Rodman, Instructor in Electrical Engineering in the Rhode Island Agricultural College, and H. S. Osborne, who graduates from Course VI. this year. Mr. Osborne has been elected Saltonstall Fellow in recognition of his unusual record as an undergraduate student.

Professor Laws and Professor Shaad each spent several days during the spring intermission studying the instruction in electrical engineering and related subjects at Cornell University. Both were

impressed by the earnestness with which the students there enter their work, but each felt that the scientific training given to the students at the Institute is unrivalled.

Mr. W. V. Lyon, Instructor in Electrical Engineering, is completing the manuscript of a book on Electrical Engineering Problems which will be published by the McGraw Publishing Company during the summer.

In connection with the lectures on Electric Light and Transmission of Power this term, Mr. A. S. Michener, comptroller of the Stone & Webster organizations, presented an admirable lecture to fourth-year students of Course VI. on the Theory of Accounting and the Relations of the Engineering, Operating, and Executive Departments to the Accounting Department, and Mr. R. A. Phillip, of the Stone & Webster Engineering Corporation, presented a finely conducted lecture on Modern Switching Practice with High-tension Circuits.

RESEARCH LABORATORY OF PHYSICAL CHEMISTRY

Three members of the Research Laboratory staff have received this year the degree of Doctor of Philosophy,—Mr. C. A. Kraus and Mr. E. W. Washburn in physical chemistry and Mr. G. A. Abbott in inorganic chemistry.

Mr. Abbott is a graduate of De Pauw University, and is a teacher in the Mechanic Arts High School of Indianapolis. His thesis represents the results of an investigation carried on in this laboratory in the years 1905-07. Its title is "A Physico-chemical Study of Ortho and Pyro Phosphoric Acids and of their Sodium and Ammonium Salts." Mr. Abbott's work is an important contribution to our knowledge of the processes occurring in the mutual transformation of the acids of phosphorus.

Mr. Washburn took his Bachelor's degree at the Institute in 1905, and has devoted three years to the study of "Ionic Hydration and True Transference Numbers," which is the title of his thesis. The problems studied by Mr. Washburn had been undertaken by several scientists before he began his research, but no results of importance

had been obtained on account of the extreme difficulty of the experimental methods. It was necessary in this work to devise analytical methods which rival in accuracy those employed in the most accurate atomic weight determinations. Mr. Washburn has revised the quantitative method of determining arsenic, and has published the results of this research in a separate paper, entitled "The Theory and Practice of the Iodometric Determination of Arsenious Acid." Although this method proved unavailable for the work in hand, others were devised which have permitted, for the first time, the calculation of the relative hydration of several important ions. Mr. Washburn has, furthermore, made a complete study of the subject of hydration in solution, and is preparing a comprehensive review on this subject.

Mr. Kraus received his Bachelor's degree from the University of Kansas in 1898. He then spent one year in graduate work at the Johns Hopkins University, and returned to Kansas to teach for one year, and also taught physics for three years in the University of California. Before coming to the Institute, Mr. Kraus had published a considerable number of important scientific papers. The last four years he has spent in the Research Laboratory of Physical Chemistry, where he has investigated "Properties of Metals dissolved in Non-metallic Solvents," and more particularly "Properties of Solutions of Metals in Liquid Ammonia." Mr. Kraus has accumulated a very large amount of information concerning the nature of these very interesting solutions, and his paper is a valuable contribution to our knowledge of metals and of substances which possess semi-metallic character.

GEOLOGY

The following changes in the instructing staff have been made for the year 1908-09:—

Mr. Waldemar Lindgren, of the United States Geological Survey, has been appointed Lecturer in Economic Geology, to succeed Professor Kemp. Dr. H. W. Shimer has been appointed Assistant Professor of Palæontology, and Mr. C. H. Clapp Instructor in Geology.

The majority of the members of the departments are to spend the coming summer in the vicinity of Boston, engaged in office and laboratory work.

Professor C. H. Warren intends to do field work in Ontario and other parts of Northern Canada, and in Western Massachusetts.

Mr. C. H. Clapp has been assigned work by the Canadian Geological Survey in the southern part of Vancouver Island.

MODERN LANGUAGES

Owing to the reduction of the modern language requirements, the instructing staff has been reduced from eight to seven members. Apart from this change, the first term of next year will be marked by three innovations, the introduction of Esperanto and of a special course in German III. for students of Course VI., and by the presence of a Prussian teacher furnished under the plan suggested by the Prussian Minister of Education to the Carnegie foundation. This plan has been in effect for some time between Prussia, on one side, and France and Germany, on the other. It does not contemplate that teachers take any part in the formal instruction of the institution which they visit. "They do not do the work, or even part of the work, of a regular teacher. This would impose too heavy a burden upon the visitors and would render their relationship with the students too didactic. The plan is for the visiting teacher to teach conversation in his own language in an informal manner for not more than two hours each day, his classes being small groups of upper classmen who wish to perfect themselves in the language of the teacher." (Circular of Carnegie Foundation.)

At the Institute this instruction will be given for the greater part to students of third-year options. The department will have practically a French exchange teacher in Mr. Dike, fresh from his year's sojourn and study in France.

MATHEMATICS

Professors Woods and Bailey have been actively engaged in the preparation of Volume II. of the New Course in Mathematics,

which is expected to be ready in provisional form for use at the beginning of the coming year.

Professor Bartlett will resume teaching in October, and Dr. Moore will return from Italy, where he has recently had the interesting opportunity of attending the International Congress of Mathematicians at Rome.

Mr. Ernest A. Miller, who has been Instructor in the department since 1902, has resigned in order to engage in business at Ithaca, N.Y.

Dr. W. H. Rover, who was appointed Instructor in 1905, has accepted an Assistant Professorship at Washington University, St. Louis, of which he is a graduate.

Dr. N. J. Lennes, who was appointed Instructor for the year of Dr. Moore's absence, has received an appointment at Brown University.

ENGLISH

Mr. Allen French (M. I. T. 1892), after a year of very satisfactory service, has resigned to accept a place in the English Department at Harvard. He will be succeeded by Mr. Sidney Gunn, A.B. of Dalhousie and A.B. and A.M. of Harvard.

ECONOMICS

Professor C. W. Doten attended a quarterly meeting and dinner of the American Statistical Association, of which he is the secretary, held at the Yale Club in New York, April 24.

Professor Doten also attended the National Conference of Charities and Correction at Richmond, Va., May 7-10, as a delegate from the School for Social Workers.

THE UNDERGRADUATES

CONVOCATIONS

On April 28 Mr. Charles M. Jesup gave a talk on the "Responsibilities of American Citizenship" before an enthusiastic convocation. He said that his subject was the result of practical ideas gained through experience.

May 22 Professor George F. Swain addressed a convocation in Huntington Hall on the Congress of Governors called by President Roosevelt to consider the best means of preserving the natural resources of the country. Professor Swain was appointed by the Acting-governor to represent Massachusetts in this Congress.

INSTITUTE COMMITTEE

At its last meeting of the year the committee made an important and far-reaching change in its membership by passing the following amendment to the constitution: "The committee shall consist of the class presidents and two members to be elected from each class, together with the presidents of the professional societies, the editor-in-chief of *The Tech* and *Technique*, the general managers of the musical clubs and the Show, and the presidents of the M. I. T. A. A. and the Y. M. C. A."

The committee, as representative of the whole Institute undergraduate body, should be able to exert a strong influence upon student affairs.

THE TECH SHOW

Garnett Alfred Joslin, '09, has been appointed general manager of the '09 Tech Show. The other leading officers are: Richard F. Goodwin, Jr., '10, stage manager; Carl J. Sittinger, '10, business manager; and Dudley Clapp, '10, advertising manager.

“THE TECH”

Channing Turner, '08, will be editor-in-chief of Volume XXVIII. of *The Tech*. Douglas C. McMurtrie, '10, will be managing editor, and Richard S. Bicknell, '10, business manager. Holman I. Pearl is secretary of the board.

Thirteen members of previous boards of *The Tech* attended the annual Tech dinner at the Hotel Westminster, June 5. Channing Turner acted as toastmaster.

An important outcome of the dinner was the formation of an association of *Tech* editors. The following organization committee was appointed: A. D. Little, '85; Professor C.-E. A. Winslow, '98; Isaac W. Litchfield, '85; and Channing Turner, '08. The association will act as an advisory board to the current editors.

The principal speakers at the dinner were Mr. Litchfield and Professor Winslow.

“TECHNIQUE, 1910”

At a meeting of the 1910 *Technique* Electoral Committee April 28, Forrester B. Avery, Clifford C. Hield, Douglas C. McMurtrie, and Philip D. Terry were elected editors.

Editor-in-chief, associate editor, grind editor, and history editor will be elected from these four.

CABOT MEDALS FOR IMPROVEMENT IN PHYSICAL DEVELOPMENT

“It has been recommended that the Cabot Medals for the year 1907-08 be awarded to the following students: Burgess Darrow, '10; Edward Kloberg, '08; Harry Eleazer Lake, '11; Philip Gustave Laurson, '10; William Orr Whitney, '11.

“The following students are regarded as worthy of honorable mention: Suren Bogdasarian, '11; Sidney Logan Day, '11; Marcus Aurelius Grossman, '11; Delos Garriott Haynes, '09; Arthur Bancroft Richardson, '11.

“ALFRED E. BURTON,

“ALLYNE L. MERRILL,

“HENRY G. PEARSON,

“WINFIELD C. TOWNE,

“Committee on the Award of the Cabot Medals.”

PROFESSIONAL SOCIETIES

Civil Engineering Society.—John F. Stevens, former chief engineer of the Panama Canal, was the chief speaker before the annual dinner of the society, May 4, at the American House. In regard to labor Mr. Stevens said: “Our scientific schools are doing a great work, teaching essentials, training brains, in fact everything is taught except man. Graduates are as innocent as babes when it comes to handling men.” Frank B. Gilbreth, a noted contractor, gave an account of the endeavors of Fred Taylor, an expert on the subject, in the settlement of the labor problem. He advised the establishing of a course in the Institute on the laws of management. Desmond FitzGerald, a member of the Corporation, started out by refuting the statement that Tech men are big-headed. Professor Swain urged the importance of continual contact with the members of the profession, particularly by joining the American Society of Civil Engineers. At the present time the Institute is far ahead of the other colleges in regard to the number of members. John T. Tobin acted as toastmaster.

L. D. Nisbet, '09, was elected president of the society at its meeting of May 12. S. N. McCain, '09, was elected vice-president; J. M. Fitzwater, '10, secretary; R. P. Waller, '09, treasurer; and F. R. Faulkner, '09, A. B. Henderson, '09, and L. J. Towne, '09, members of the executive committee.

Mechanical Engineering Society.—At the annual dinner of the society at the Copley Square Hotel, April 3, Mr. J. P. Tolman, '68, gave a talk on “Insurance.” The other speakers were Professors Lanza, Schwamb, Haven, and Peabody.

At a meeting of the society at the Union, May 4, officers were elected for the next year, and talks were given by E. R. Hall, '08, and J. M. Talbot, '08. The following were elected officers: president, C. W. Hubbard, '09; vice-president, J. W. Nickerson, '09; secretary, F. A. Dewey, '09; treasurer, B. W. Dow, '09; executive committee, R. W. Millard, '09, A. T. Weeks, '09, and H. A. Hale, Jr., '10.

Mining Engineering Society.—The officers for the ensuing year are as follows: president, L. A. Loomis, '09; vice-president and

treasurer, A. L. Dickerman, '09; secretary, R. S. Breyer, '10; George Miller, '08, and V. C. Warren, '10, were elected to serve with the other officers on the executive committee.

Architectural Society.—Clarence Jay Brown, '09, was elected president of the society for the year 1908-09, at the meeting of May 14.

Other officers are as follows: Montague Flagg, '09, vice-president; Thomas Henry Atherton, Jr., A.B., '09, secretary; Felix Arnold Burton, A.B., '10, treasurer. The executive committee will be made up of Alfred Galpin Kellogg, '09; John Carlisle Bollenbacher, A.B., '09; and Daniel Wilson Gibbs, '09.

A large number of the architects attended the annual dinner of the Boston Architectural Club at the Hotel Somerset on May 15, the affair being a sort of reception to the winner of the Rotch Travelling Fellowship, Israel P. Lord, a graduate of the Architectural Department. The Harvard architectural students gave their theatrical production, "The Mummy and the Lulu Bird," following the regular speakers, of whom Professor Despradelle was one.

With Mr. Ralph A. Cram as the principal speaker of the evening, and with the majority of their instructors present, the society ended one of its most successful years at the annual dinner at the Copley Square Hotel May 16.

Chemical Society.—With J. F. Norton, '06, as toastmaster, the society held a dinner at the Union, April 28. The annual elections were announced as follows: president, C. H. Pope, '09; vice-president, W. J. Kelley, '09; treasurer, C. W. Gram, '09; secretary, C. S. Robinson, '09; and L. J. D. Healy, '09, member of the executive committee. Dr. Talbot advised the upholding of the dignity of the chemical engineer. Dr. Gill spoke of the value of a thorough familiarity with the tools and instruments of a laboratory, while Dr. Walker talked on the American Chemical Society, advising all graduates of Courses V. and X. to become members. Mr. Charles Field gave an interesting account of some of his Western experiences. Dr. F. H. Thorpe gave a talk upon "The Self-made Man."

Biological Society.—Organized on a permanent basis Jan. 7, 1908, the Biological Society has enjoyed a rapid and successful growth, and now stands as the representative professional society of Course

VII. and to some extent of Course XI., on a level with the other course societies of the Institute.

At the last dinner of the society for the year, April 30, Mr. George C. Whipple, the prominent sanitary engineer, of the firm of Hazen & Whipple, New York, gave an interesting illustrated talk on "Typhoid Fever."

CLUBS AND ASSOCIATIONS

Y. M. C. A..—Officers for the coming year have been elected as follows: president, T. Henry Atherton; vice-president, Myron M. Davis; recording secretary, Robert E. Doane; treasurer, John N. Brooks.

Brotherhood of St. Andrew.—Mr. Fred R. Kneeland, instructor in the Chemical Department, has been chosen director of the Technology Chapter for the coming year. Richard H. Ranger, '11, was re-elected secretary-treasurer.

Walker Club.—Professor J. O. Sumner, of the History Department, talked before the club April 28, the speaker giving some deeply interesting anecdotes from his travels in Europe and South America.

Civic Club.—The club had a House of Representatives meeting at the Union, April 7. Hon. Grafton D. Cushing, of Boston, a member of the State legislature, in his introduction pointed out how this State's legislation accomplishes results.

Many vital and interesting talks on the relation of engineering to society in general were given at the club dinner, the last event of the year, at the Union, May 9. In a well-worded speech, J. G. Reid, '08, turned over the presidency to Ridsdale Ellis, '09, who was recently elected for next year. Thirty-five men, including Dean Burton, Professors Sedgwick, Bates, and Seaver, were present.

Musical Clubs.—The annual dinner and meeting of the Glee, Banjo, and Mandolin Clubs was held May 9 at the Copley Square Hotel. In the combined clubs Clifford C. Hield, '10, was elected president; N. Coleman, '09, vice-president; F. W. Sharman, '08, secretary; Wallace D. Richardson, '10, general manager and treasurer. Maurice Shriff, '09, was elected leader of the Banjo Club,

with Harold Lockett, '10, as manager. Nat Coleman continues as leader of the Mandolin Club, while Donald Stevens, '11, was elected manager. Clinton W. Pyle, '09, is the new leader of the Glee Club, with Caldwell as manager.

Cleofan.—On May 22 Mabel K. Babcock, '08, was elected president of Cleofan for the coming school year. Helen McG. Longyear, '09, was elected vice-president, and Rebecca H. Thompson, '09, and Elizabeth B. Babcock, '09, were chosen for the offices of secretary and treasurer, respectively.

British Empire Association.—At the annual meeting the following were elected officers for the ensuing year: president, Thomas A. Tillard, '09, of Hampshire, England; vice-president, Edgerton M. Bettington, '09, Johannesburg, South Africa; executive committee, Frederick R. Faulkner, '09, New Brunswick; Ridsdale Ellis, '09, Leicester, England; Ernest E. Wells, '09, Toronto, Canada.

New York State Club.—May 13 the club held its annual meeting and dinner at the Union. The elections for the coming school year resulted as follows: president, P. D. Terry, '10; vice-president, H. W. Dun, Jr., '08; secretary, W. D. Green, '09; treasurer, H. A. Higbie, '09.

Pennsylvania Club.—At the last meeting the following officers were elected: president, Samuel N. McCain, '09, Allegheny; vice-president, John S. Pearce, '09, Saltsburg; secretary, Arthur L. Stein, '10, Scranton; treasurer, Raymond W. Jacoby, '10, Wilkes-Barre; executive committee, Walter S. Woods, '09, Germantown; Churchill, '10, and Warner, '11.

Mechanic Arts High School Club.—John T. Tobin, '08, spoke before a number of prospective Institute men entertained at the Union, April 14, by the club during their annual dinner. The next year's Freshmen addressed were members of the graduating class at the high school. Besides these there were present several graduates of the school now studying at Tufts and Harvard, the total number at the dinner being fifty-two. Dr. Parmenter, Messrs. Parish and Fuller, were guests from the school. Rudolph B. Weiler, '08, founder and ex-president of the club, spoke on the club's past and future.

Newton High School Club.—The annual dinner was held at the Union, May 15. President Kenneth Chipman, '08, was the master of ceremonies. The guests were Dean Burton, Mr. Charles D. Meserve, and five Newton High School men who will be at the Institute next year.

New England Intercollegiate Press Association.—The annual meeting was held May 22 at the Hotel Westminster. In the election of officers for next year S. B. Fairbank, of Amherst, was elected president; Miss Marion E. Markley, of Wellesley, vice-president; and C. Turner, of Tech, secretary-treasurer.

ATHLETICS.

TRACK TEAM

Annual Spring Meet.—The annual spring meet was held April 11, at the Field. In most of the races the finishes were very close, and the contest between the four classes was the hottest known in years.

After a very even and hard-fought contest the Seniors won from the Juniors by but two-thirds of a point.

University of Maine.—Technology swamped Maine in the dual meet at Tech Field May 2, by the score of $87\frac{1}{2}$ to $38\frac{1}{2}$. From the very start Tech was away ahead, and at no time was the meet even interesting.

Maine furnished poor competition, partly because a good many of their best men were kept at home by the Faculty on account of the condition of their scholarship.

Brown University.—In a hotly contested meet the Tech track team defeated Brown University May 9, at the Field, by a margin of 17 points. The Institute team scored seven firsts, ten seconds, and six thirds, while Brown captured seven firsts, four seconds, and seven thirds. With one point split between the two teams, the score was $71\frac{1}{2}$ to $54\frac{1}{2}$.

Captain.—Carl William Gram, '09, has been unanimously elected captain of the track team for the year 1908-09.

NEW ENGLAND INTERCOLLEGIATE ATHLETIC MEET

The meet was held this year at Tech Field, the preliminary contests taking place on May 22 and the final contests on May 23. Ten colleges besides Technology took part:—

Dartmouth won the meet with the extraordinary total of 49 points, Bowdoin coming second with 19 points, and the Institute being tied for third place with Wesleyan, each with 18 points. Williams had 16, Amherst 15, Brown 10, University of Maine 4, Trinity 3, Tufts and the University of Vermont 1 point each.

Two records were broken and one equalled in another brilliant performance by Shaw, the greatest hurdler in the college world to-day. The new marks were made in the field events, Palmer of Dartmouth and Horrax, of Williams, sharing the honor of establishing the new figures in the running jump,—5 feet $11\frac{3}{4}$ inches,—an improvement of one-quarter inch over the mark set by Horrax at Worcester last year.

The following is the total of points:—

First place counts 5, second 3, third 2, fourth 1.

EVENTS.	Dartmouth.	Bowdoin.	Technology.	Wesleyan.	Williams.	Amherst.	Brown.	Maine.	Trinity.	Tufts.	Vermont.
100-yard dash	5	—	—	3	—	3	—	—	—	—	—
220-yard dash	5	—	1	5	—	—	—	—	—	—	—
440-yard dash	1	—	2	3	—	5	—	—	—	—	—
880-yard run	1	—	3	5	—	—	—	2	—	—	—
One-mile run	2	3	—	—	—	5	—	—	—	—	1
Two-mile run	—	5	3	—	—	—	2	—	1	—	—
High hurdles	5	—	—	—	3	—	1	—	2	—	—
Low hurdles	5	3	—	—	—	—	1	2	—	—	—
Shot	3	5	2	—	—	1	—	—	—	—	—
Hammer	8	2	—	—	—	1	—	—	—	—	—
Discus	5	—	1	—	2	—	3	—	—	—	—
High jump	4	—	—	—	6	—	—	—	—	1	—
Running broad jump .	5	—	1	2	—	—	3	—	—	—	—
Pole vault	—	1	5	—	5	—	—	—	—	—	—
Total	49	19	18	18	16	15	10	4	3	1	1

RELAY TEAM

After surpassing all previous Tech performances, the Institute relay team had to be content with second place in the race with Wesleyan and Ohio State in the Penn games, April 25. First place went to Wesleyan.

CROSS COUNTRY

The new cross-country cup which will be competed for annually by the Freshman and Sophomore teams was presented to the Institute at the cross-country dinner on May 20 by F. H. Hunter, '02, on behalf of the alumni. The cup was purchased from the proceeds of subscriptions from the former cross-country men of the Institute and some of the undergraduates.

The cup is a large Tobin bronze trophy, standing eighteen inches high. The bronze was taken from the hull of the "Columbia" when that famous racing craft was dismantled. On one side is a large cTc in raised letters, on the other small raised shields prove a pleasing contrast to the plain engraving. The 1911 numerals are already engraved on the first shield.

Major Frank H. Briggs, '81, accepted the cup on behalf of the Institute.

GOLF

At a meeting of the Golf Club May 5, T. A. Tillard, '09, was elected president for next year, and W. F. Herrick, '11, manager.

MILITARY DRILL

The annual prize drill of the Corps of Cadets was won May 22 by Company C.

The individual drill was won by H. C. Davis, Jr., of Company B, R. E. Runels of Company D taking second honors.

After the drill, according to the annual custom, more than two hundred of the Freshmen gathered in front of Rogers Building. A huge bonfire was built directly below the steps, and the white gloves and collars used during the preceding year were burned in the flames.

THE GRADUATES

ASSOCIATION OF CLASS SECRETARIES OF THE M. I. T.

A special meeting of the Association of Class Secretaries was held at the Technology Club, Boston, on Thursday evening, April 30, 1908. Professor Robert H. Richards acted as chairman. Walter B. Snow, '82, chairman of the Commencement Celebration Committee, stated that, in view of the fact that the annual reception of the graduating class had become a somewhat unwieldy affair, the committee had decided to omit it this year and introduce some new features into the programme of the Pop Concert, which would largely take its place. He also proposed that the class spreads be held from 5.30 to 7.45 on the evening of the Pop Concert in connection with a buffet supper to be served in the banquet hall of the Brunswick. This plan was fully discussed, and the recommendations of the committee accepted.

The committee appointed at the previous meeting to select a managing editor for *THE TECHNOLOGY REVIEW* to succeed Mr. Munroe, whose resignation had been most reluctantly accepted, reported that a decision had been reached, and the committee requested authority to engage an editor at an annual salary not to exceed five hundred dollars. Mr. Snow's motion to this effect was carried.

Dr. A. A. Noyes, '86, Acting President of the Institute, stated that the Corporation had felt the need of more systematic and better-directed effort in the matter of bringing the Institute and its work before the public, and that the Executive Committee of the Corporation had authorized him to engage for this work the man selected by the Class Secretaries' Committee for the managing editorship of *THE TECHNOLOGY REVIEW*. It was felt that the editorial and publicity work might very properly be carried on by the same individual, whose office would be the alumni headquarters in the Rogers Building of the Institute.

Announcement was then made that the man selected for the two

positions by the Class Secretaries' Committee and by the Executive Committee of the Corporation was I. W. Litchfield, '85.

The following letter was read by the secretary:—

BOSTON, April 15, 1908.

Mr. FREDERIC H. FAY, '93,
Secretary, Association of Class Secretaries.

My dear Mr. Fay,—It was voted at a meeting of the Executive Committee of the Alumni Association that the President of the Alumni Association be asked to present the question of the reorganization of the Alumni Association to the Association of Class Secretaries, and that the Association be asked to co-operate with the Executive Committee in a consideration of this question.

Yours very truly,

(Signed) WALTER HUMPHREYS,
Secretary.

President W. B. Snow, of the Alumni Association, then outlined the proposed changes in the constitution of that body and the reasons therefor. Under the present arrangement the general business of that organization is transacted just prior to the annual dinner by a relatively small group of men, who hurry through the business as rapidly as possible without the opportunity of giving careful consideration to the several matters of greater or less importance which are presented for action. The Alumni Executive Committee, which deals with special and lesser matters of business throughout the year, is a small body, and therefore not representative of the whole body of the alumni. It is now proposed to place the general control of the affairs of the Alumni Association in the hands of a council, to be made up as follows:—

1. An Executive Committee of eight, elected at large, as at present.
2. The secretaries of all graduate classes or such other class representatives as the classes may select.
3. The secretaries of all local alumni associations or such representatives as may be elected by these organizations.
4. The fifteen term members of the Corporation of the Institute, who are elected by the Corporation from a list of candidates selected by the Alumni Association.

The plan proposed would probably lead to the dissolution of the Association of Class Secretaries, but most of the individual mem-

bers would be given office of real power in the council. It would naturally result in the publication of THE TECHNOLOGY REVIEW as the official organ of the Alumni Association.

In the discussion which followed the proposed plan met with general approval. Upon motion of F. H. Hunter, '02, it was

Voted, That a committee of three be appointed by the chair to co-operate with the Executive Committee of the Alumni Association in considering plans for the reorganization of that Association.

The chairman appointed, as the Committee of the Class Secretaries, Professor C.-E. A. Winslow, '98; H. S. Chase, '83; and Professor C. Frank Allen, '72.

The meeting adjourned at 9.45 P.M.

Attendance, thirty-two.

FREDERIC H. FAY, '93, *Secretary.*

THE TECHNOLOGY CLUB OF NEW YORK

The events of interest at the Technology Club of New York since the last issue of the REVIEW have included three smokers and a dance.

At the smoker on March 28 H. B. Fullerton, '79, entertained us with a picturesque talk on "Technology Methods of Pioneering," telling us how a barren tract of land on Long Island, N. Y., was converted into a fruitful garden. The lantern slides showed the tract first covered with stumps and wild growth, then the process of reclamation, and finally the prize products,—vegetables, fruit, and flowers, the result of applied science. When the Institute gives the honorary degree of Doctor of Science, Mr. Fullerton's name should be called, not only for his splendid work at the "Experimental Station" on Long Island, but because he is a loyal son of Technology.

At the April meeting Allen Hazen, '88, took us on "A Short Trip to Australia," and, aided by a lantern, gave us interesting glimpses of its city, town, farming, and wild life, and very modestly told us of his efficient work in furnishing water supply, despite obstacles of climate and country.

On June 6 Mr. J. Richmond Pitman, who has had an extended experience both in the government laboratories and as manager of one of the largest powder factories in the world, addressed us on "The Manufacture of Smokeless Powder," and supplemented his lecture by an exhibition of specimens and diagrams.

This concluded the season's series of monthly smokers, but on September 26, 1908, the committee, of which Clarence M. Joyce, '03, is chairman, will arrange for a smoker in honor of '08; and members of '08 in or near New York at that time are requested to send their addresses to the secretary, that due notice may be given them.

The Entertainment Committee, of which H. C. Tuttle, '90, is chairman, ended the season by giving a "ladies' night dance" on the evening of May 15 at the Chemists' Club Hall, 108 West 55th Street, our own club-house not affording facilities for such a function. C. R. Place, '02, as chairman of the Dance Committee, made the evening a success in every way, and the courtesy and hospitality of the Chemists' Club were much appreciated.

Our Membership Committee is now under the direction of Francis C. Green, '95; the Committee on New Club-house has Allston Sargent, '98, for its chairman; and Walter Large, '79, is chairman of a new committee on Amendment of Constitution and By-laws, to meet the increasing activities of the club.

The attention of men who have not yet joined the club is called to the following friendly statement, acknowledgment of which is hereby gratefully made, contained in the carefully compiled and interesting "Second Record Book of the Class of '02" recently issued:—

This is the only Technology Club out of the shadow of the Institute that has a club-house of its own, and the class secretary can state from experience that the club-house, though not pretentious, is a centre of loyal Tech spirit and royal good fellowship. Every '02 man and every Tech man, for that matter, who is in or near New York, should be a member.

WILLIAM H. KING, '94, *Secretary,*
36 East 28th Street, New York, N.Y.

THE TECHNOLOGY CLUB OF PHILADELPHIA

The third informal dinner and meeting of the Technology Club of Philadelphia was held at the City Club on Friday evening, April 24. An excellent planked shad dinner was served, which was followed by a very interesting paper by Mr. Eugene S. Foljambe, '01, editor of the *Cycle and Automobile Trade Journal*. Mr. Foljambe traced the development of the automobile, and spoke of the present need of applying stricter engineering methods in the automobile industry. In closing, he explained and gave an actual demonstration of a new process of brazing and welding by means of a hydrogen-acetylene flame. With apparatus furnished through the courtesy of the Ferrofix Brazing Company, pieces of steel were readily welded together.

All '08 men who may settle in Philadelphia or vicinity are urged to communicate with the secretary at once.

PERCY E. TILLSON, '06, *Secretary*,
3411 Walnut Street, Philadelphia, Pa.

THE TECHNOLOGY CLUB OF BUFFALO

The Technology Club of Buffalo held its spring meeting on the evening of April 28. After a substantial dinner and the regular order of business were disposed of, we listened to a highly entertaining talk on the subject of Electric Smelting by Mr. Francis A. J. Fitzgerald, of Niagara Falls, one of the few experts in this line, and one who is thoroughly familiar with the subject from the beginning.

Among those present were Messrs. Shedd, Sanders, Watkins, Spaulding, Henrich, Swift, Nagel, O'Connor, and Vogel.

The next meeting will probably be held at Niagara Falls about July 1.

H. A. BOYD, '79, *Secretary*,
Erie County Bank Building, Buffalo, N.Y.

WASHINGTON SOCIETY OF THE M. I. T.

The annual dinner, the principal event in the yearly calendar of the Washington Society, took place on Wednesday evening, April 21, 1908.

Dr. Arthur A. Noyes was the chief guest of the society. His interesting address was listened to most attentively by an appreciative audience of over sixty of the Institute alumni and several distinguished guests. He gave a description of the development of the Institute during the past year and the proposed lines of development in the future. The three main lines which will be followed are: (1) the removal to a new site, and the rebuilding of the Institute; (2) developments in courses and methods of instruction; and (3) the development of student life and activities.

Dr. Noyes spoke in his most effective style, the keynote of his talk being the need of an aggressive policy in the future life of the school. This sentiment in particular, as well as the address as a whole, was most sincerely applauded.

The Hon. George Otis Smith, director of the Geological Survey, made a humorous address on "The Tech Graduate as a Water Man." He referred to the fact that the Tech men on the Geological Survey staff were "running to water," since most of them seem to be connected with the irrigation and reclamation work in the West.

The Hon. C. R. Thomas, member of Congress from North Carolina, delivered an oration on "The Technical Graduate in the South." He eloquently presented the engineering problems and possibilities of the new South as a field for the young engineer.

The Hon. James M. Miller, member of Congress from Kansas, discussed "The Civic Duties of a Technical Graduate" in very effective language.

The Hon. S. W. McCall, member of Congress from Massachusetts, responded to the toast "Massachusetts." He proved one of the most entertaining of speakers, and paid repeated tributes both to the State and to the Institute.

The Hon. Butler Ames, '96, also member of Congress from Massachusetts, was unable to be present and deliver the greeting, but his absence was, to a large degree, compensated for by the

skilful manner in which the Hon. F. H. Newell, '85, director of the United States Reclamation Service, developed the program for the evening in his capacity of toastmaster.

Those present were: Dr. Arthur A. Noyes, '86; Hon. F. H. Newell, '85; Hon. S. W. McCall; Hon. James M. Miller, Hon. C. R. Thomas, Hon. George Otis Smith; Francis E. Cady, '01; R. H. Bolster, '01; W. Cole, '87; A. E. Adams, '90; W. U. C. Baton, '04; Robert Mayo, Jr., '02; E. F. Allbright, '04; William McEntee, '04; A. L. Whitmarsh, '05; H. S. Bailey, '05; F. W. Guibord, '05; H. W. Kenway, '05; F. E. Fowle, '94; C. G. Abbot, '94; W. I. Swanton, '93; M. O. Leighton, '96 (president); W. P. Haynes (guest); A. M. Holcombe, '04; C. R. Haynes, '04; M. E. Weaver, '04; C. F. Willard, '01; W. J. Gill, Jr., '04; Robert B. Sosman, '04; Proctor L. Dougherty, '97; Ferdinand T. Schneider, '92; Frederick W. Wood, '77; William W. Stevens, '98; John Boyle, Jr., '01; Frederick W. Southworth, '00; Mark E. Taylor, '98; Frederick Bachmann, '97; Harold A. Kingsbury, '07; G. W. Stose, '93; John Allen Davis, '07; Edward L. Wilson, '06; H. A. Terrell, '06; Jos. T. Lawton, Jr., '06; N. Loring Danforth, '05; Allen Pope, '07; Grandville R. Jones, '07; Henry A. Pressey, '96; Martin Boyle, '98; Vernon M. Peirce, '96; Jos. J. Moebs, '98; J. E. Woodwell, '96; J. W. Clary, '96; G. W. Perley, '96; H. H. W. Keith, '05; F. Charles Starr, '05; H. M. Lynde, '05; W. M. Beaman, '89; William J. Rich, '84; R. B. Dole, '04; N. C. Phalen, '99; Francois E. Matthes, '95; H. N. Parker, '94; Frederick A. Kendall, '87; Arthur Cutts Willard, '04 (secretary).

Mr. Frederick W. Wood, president of the Maryland Steel Company, and Mr. Joseph T. Lawton, Jr., came over from Baltimore for the dinner. Dr. Arthur A. Noyes, President of the Massachusetts Institute of Technology, and Mr. C. R. Haynes and Mr. W. P. Haynes came from Boston.

The society is deeply indebted to its president, Mr. M. O. Leighton, chief hydrographer, United States Geological Survey, for a programme replete with the names of men of national reputation.

The very successful outcome of the dinner has created a feeling that an alumni society has properly fulfilled its function when a

single event during the year has developed general interest on the part of the whole membership. We congratulate ourselves that our society has accomplished this result.

ARTHUR CUTTS WILLARD, '04, *Secretary,*
The George Washington University, Washington, D.C.

THE TECHNOLOGY CLUB OF NEW BEDFORD

The last meeting of the Technology Club of New Bedford for the season of 1907-08 was held on May 28 at the home of Charles R. Allen. Robinson, '98, and Wing, '98, attended the '98 class dinner at the Copley Square on June 8. LeRoy A. Swan, '97, has been appointed chairman of the Board of License Commissioners. Robinson, '98, was married on the 8th of April to Miss Dolliber, of Brookline.

CHARLES F. WING, JR., '99, *Secretary,*
34 Purchase Street, New Bedford, Mass.

TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA

So far as the secretary has been able to learn, the first gathering of Tech men in the South-west occurred in Los Angeles on Dec. 16, 1907. There were eighteen men present, and the evening was spent in eating, singing, and informal talks on the advisability of forming a permanent organization of Tech men in Southern California. The meeting was unanimously in favor of the proposition, and the following officers were elected for the current year: W. T. Knowlton, '93, president; James W. Johnson, '82, vice-president; and Arthur B. White, '00, secretary-treasurer. The officers were appointed a committee to draft a constitution and present at the next meeting. Professor Lodge was a guest of the association, and gave a very interesting and instructive talk on Institute affairs.

The first regular meeting and banquet of the Technology Club of Southern California was held on Saturday evening, June 6, 1908, at the University Club in Los Angeles, Cal., and presided over by W. T. Knowlton, '93, president of the club. Twenty-two men sat

around the festive board, which was laid out in the form of a "T" in honor of Technology, and many old acquaintances were renewed.

Mr. Samuel Storrow, '90, entertained those present with a very interesting paper expressing his views on the long-talked of union of Harvard University and M. I. T. He was very much in favor of such a combination, and should speak from an unbiased standpoint, being, as he said, a graduate of both institutions. His main argument was that the Tech man at graduation was lacking in that one essential element of the successful man of to-day,—the ability to express his views clearly, concisely, and forcefully. It was generally conceded that Mr. Storrow had stated the greatest weakness of Tech graduates, but it was the general opinion that this could be remedied more efficiently than by means of a combination with Harvard.

Mr. W. K. Gaylord, '93, who is a professor at Throop Institute, outlined in a general way the past history and the proposed future expansion of Throop, and expressed his belief that this expansion and development would be along the lines already laid down by his Alma Mater.

The society then listened to an interesting and instructive talk by F. H. Merrill, '93, on the manufacture of soap, past and present, starting with the "way our grandmothers made soap," and ending with the present complicated and elaborate methods, full of all sorts of chemical formulas and reactions.

The business part of the programme included the reading of the minutes by the secretary, which were approved, and the presentation of a constitution, which was unanimously approved and adopted. The constitution states that the objects of the society are: first, to bring all Institute men closer together, and to keep alive the interest and spirit of Technology; secondly, that all Tech men may become better acquainted socially, and mutually helpful to one another; and, thirdly, for the professional improvement of its members. It also states that any one who has been connected with the Institute one year is eligible to membership, and that the society shall hold two regular meetings each year, one on the first Saturday in June and one on the first Saturday in December. The society herewith

extends an invitation to any Tech man who may be in this vicinity at any of its meetings to be present.

The dinner broke up with a toast to Technology, followed by Tech yells and Tech songs. The secretary has a list of about forty-five men in Southern California, and he would be glad to receive information in regard to any more who are living in this locality.

ARTHUR B. WHITE, '00, *Secretary,*
606 San Fernando Building, Los Angeles, Cal.

THE M. I. T. CLUB OF CENTRAL NEW YORK

After a dinner tendered to Professor A. H. Gill by the alumni in the vicinity of Syracuse, the M. I. T. Club of Central New York was formed.

Those present were W. E. Hopton, '91; H. W. Jordan, '91; A. T. Taylor, '94; H. F. Hawley, '96; I. S. Merrell, '96; E. C. Witherby, '97; F. D. Ingalls, '01; W. G. Wildes, '01; Charles G. Glenn, '03; David Mohler, '03; W. W. Cronin, '04; J. P. Barnes, '05; R. W. Collins, '05; J. Cheney Baker, '05; Ernest Smith, '06; Joseph R. Vedder, '06; H. H. McChesney, '07; Harry Burhans, '07; and F. C. Ware. The news of the Institute given us by Professor Gill was of great interest to all, and his presence aided greatly in the forming of the club.

Since then a second meeting has been held on April 11, 1908, at the residence of Mr. Walter E. Hopton, '91, which was well attended. At this meeting we had the pleasure of entertaining, as the guest of honor, the Bursar, Mr. Frank H. Rand. Mr. Rand's talk was of particular interest to the older alumni, as much of the social side of Institute life which it covered has developed in late years. The club had also as guest Mr. J. William Smith, who is always a staunch friend of the Institute.

Since the first meeting F. C. Moore, '91, and Edwin Bonta, '07, have joined the club.

IRVING S. MERRELL, '96, *Secretary,*
North Franklin and Plum Streets, Syracuse, N.Y.

THE TECHNOLOGY CLUB

On the eleventh evening of the season, Tuesday, April 21, Mr. E. T. Hartman, secretary of the Massachusetts Civic League, gave a smoke talk on "Town Planning and Housing Reform," and spoke of the prevention and cure of slums. Last summer Mr. Hartman travelled over Europe, studying model industrial towns, such as Port Sunlight and Garden City. He also made a study of slum districts in the large manufacturing cities of England and Germany. The lecture was illustrated by many interesting lantern slides.

In accordance with the revised By-laws, the annual meeting of the Technology Club was held on Wednesday, May 6, at 7.45 o'clock, to hear reports, elect officers for the ensuing year and consider any other business coming before the club.

Reports for the six months since October 1, 1907, were read by the secretary and the treasurer. The total membership was given as 716. The efficient work of the new steward, Mr. A. F. Sidney, has brought out many signs of approval from members of the club. The treasurer's report substantiated this feeling by showing a greatly improved balance for the period since Mr. Sidney was engaged.

The following officers were unanimously elected for the ensuing year: president, James Flack Norris; vice-president, Frank Henry Rand; secretary, Robert Seaton Williams, '02; treasurer, Augustus Herman Gill, '84.

Members of Council for three years: Henry Fay; Seth King Humphrey, '97; Frederick Revell Kneeland; Joseph Hyde Knight, '96; Harry Walter Tyler, '84. In accordance with the amended by-laws the president, vice-president, secretary, and treasurer do not enter upon their terms of office until June 9, Graduation Day of the Massachusetts Institute of Technology.

On the twelfth evening of the season, Wednesday, May 6, immediately after the annual meeting, Professor Louis Derr gave a smoke talk on "Recent Developments in Color Photography." The subject was well illustrated by a carefully selected set of colored lantern slides. The attendance was 105.

At all these club evenings members have the privilege of inviting guests.

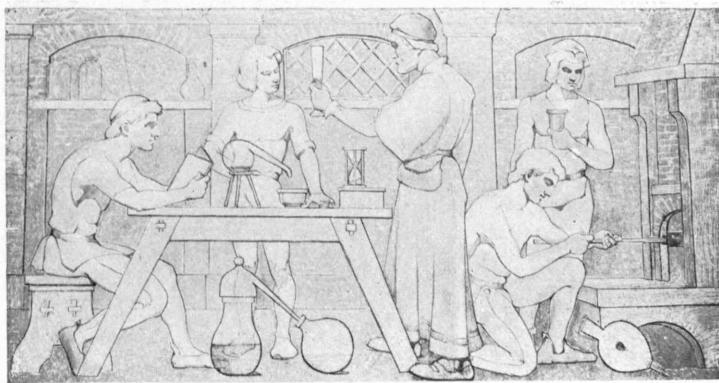
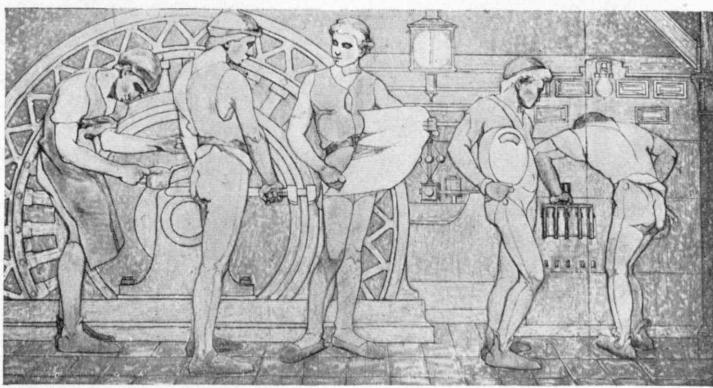
ANGELO T. HEYWOOD, '06, *Secretary,*
83 Newbury Street, Boston, Mass.

1895 HUNTINGTON HALL PANELS

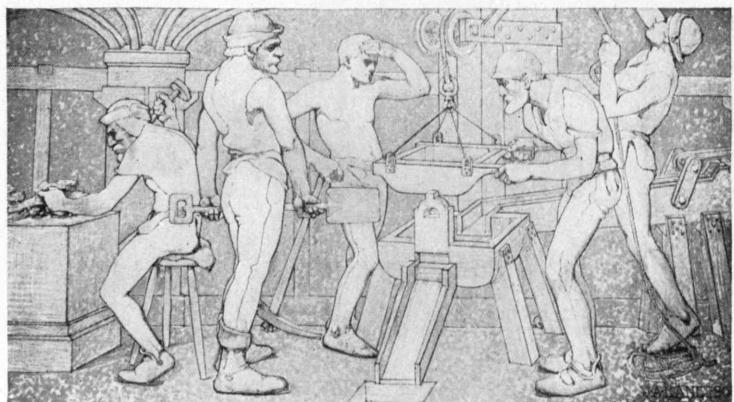
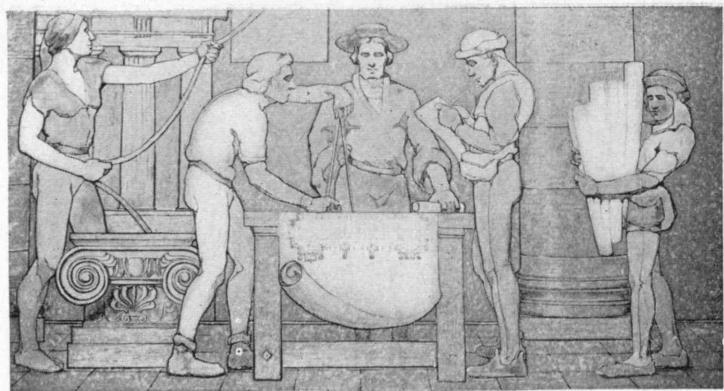
On June 8, at the Class Day exercises of the class of 1908, four panels were unveiled in Huntington Hall by Mr. Rapelye, president of the graduating class. These panels are over the entrance doors, at the right and left of the platform. The subjects are Chemistry, Mining and Metallurgy, Architecture, and Electrical Engineering. They are known as the class of 1895 panels, as an appropriation to cover the expense of making them was made by the class at its decennial dinner in 1905. The actual work, however, on the drawings was done by the advanced students of the Architectural Department under the direction of Mr. W. Felton Brown, the instructor in freehand drawing, who also had charge of the six panels unveiled in 1905 as a memorial of the class of 1905. This completes the frieze on the front wall of Huntington Hall. It is now up to the other classes and friends of the Institute to complete the mural paintings around the hall. There are one small and four large panels on the west wall to be filled, and the same number on the east wall. There are two large and six small panels and spandrels over three windows to be filled on the north wall. These panels can be put up at an expense of \$50 to \$100 for one or more, provided they can be executed by the students as before, so that any contribution will be taken care of by putting up as many panels as possible in the hall. To those who cannot turn to the article on "Huntington Hall Frieze" in THE TECHNOLOGY REVIEW, Volume 7, No. 2, April, 1905, which gives reproductions of the 1871 frieze, the following notes may be of interest. In 1898 the wall decoration, showing in outline emblematic figures representing the different arts, sciences, and technical processes, was painted over during alterations. In 1904 the original sketches for that frieze, made by Paul Nefflen, were purchased through the interest and subscriptions of twelve

Tech men and others who believed there was something in them worth preserving. These have been used as an inspiration in carrying out the present paintings. The accompanying photographs of the frieze show the character of the work, which is carried out in warm brownish tones, kept very flat. The panels are interesting in composition, and also are in harmony with the central panels, both in color and drawing. Any one who is at all interested in assisting in carrying out this frieze may communicate with Dean Burton or Mr. W. Felton Brown at the Institute, or with the undersigned,

FRANK A. BOURNE, '95.



SECTIONS OF HUNTINGTON HALL FRIEZE PRESENTED BY THE
CLASS OF 1895



SECTIONS OF HUNTINGTON HALL FRIEZE PRESENTED BY THE
CLASS OF 1895

NEWS FROM THE CLASSES

1868.

ROBERT H. RICHARDS, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The classes of '68 and '69 had a dinner together at the Technology Club on June 8, 1908. There were present Whitney Conant, Eli Forbes, William E. Hoyt, Robert H. Richards, James P. Tolman, C. B. Fillebrown, Eben S. Stevens, William E. Stone, Daniel M. Wheeler, Ernest W. Bowditch, Howard A. Carson, Channing Whitaker, and J. Rayner Edmands. The dinner was a very jolly affair, and carried back the members to the old days when they used to be together as boys.—A most delightful dinner was given to Robert H. Richards, to congratulate him on the completion of forty years of teaching at Technology, at the University Club on June 6, 1908. The guests were taken from the class of '68, from the mining students of the Institute, from the Faculty up to the time when Mr. Richards resigned as Secretary of the Faculty, and from the Executive Committee of the Corporation. Many delightful speeches were made, which were warmly appreciated by Mr. Richards. In his own words, "They lifted me up to the skies and put me on a platform so high and fine that I cannot possibly reach it if I live a thousand years." The commemoration was signalized by the presentation of a beautiful hammered silver salad bowl with the inscription: "Robert Hallowell Richards, Massachusetts Institute of Technology, June, 1908, forty years in the service." There were present, besides Professor Richards, Acting President Noyes, Messrs. Livermore, Fish, Tolman, Williams, Munroe, Stevens, and Morss of the Corporation; Professors Watson, T. M. Clark, Lodge, and Puffer, formerly of the Faculty; Professors Niles, Cross, Lanza, Swain, Burton, and Hofman of the Faculty; Bowditch and Conant, '68; Rollins, '71; Ward, '72; Stafford, '73; Hibbard and Jenney, '77; Towne, '78; Cabot, '79; French, '82; Tenney, '83; F. F. Johnson,

'84; C. L. Brown, '88; Whiting, '89; W. A. Tucker, '93; Brocknier, '93; Jacobs, '97; Hurter, '98; and Heywood, '06.—The University of Missouri at Columbia conferred upon Robert H. Richards the degree of Doctor of Laws on June 3, 1908.

1873.

SAMUEL E. TINKHAM, *Sec.*, City Hall, Boston, MASS.

The following is from the *Milford Gazette* of March 6, 1908:—

The community was shocked last Monday to learn of the death of Frederick L. Fisher, which occurred at an early hour on that day at his home, 35 Howland Street, Roxbury. Mr. Fisher was in town last Friday, apparently in his usual health, and had attended to his business here and met many of our people. His death was caused by acute indigestion affecting a weak heart. He was born in Medway Jan. 12, 1853, the seventh child of Hon. and Mrs. Milton Metcalf Fisher and the grandson of Hon. Luther Metcalf. He was educated in our schools, and in 1873 graduated from the Massachusetts Institute of Technology as a civil engineer, which profession he followed only a short time. About 1876 he engaged in the general store business in this place with Leonard E. Taylor, under the firm name of Fisher & Taylor, selling out two years later to E. W. Tyler, of Rockville. While in this business Mr. Fisher met with an accident, falling from a roof at his home, and so injuring one of his legs that it had to be amputated. He then entered his father's insurance office, and later succeeded to the business, which he had greatly enlarged, adding a Boston office to the local one. He was well known in insurance circles throughout the eastern part of the State. In 1887 he was elected treasurer of the Medway Savings Bank, which position he held for ten years, resigning April 22, 1897. He was a trustee of the bank at the time of his death and a trustee of Sanford Hall. Early in life he became a member of the village church, and was for many years clerk of its society and superintendent of its Sunday-school. He was affiliated with Norfolk Lodge, Knights of Honor, and a past grand of Medway Lodge, Odd Fellows. In 1873 he married Miss Caroline P. Lyon, of Boston, and to them a daughter was born in 1880.

During his business life he had managed many estates as executor and guardian, and was well versed in probate matters and an authority on insurance of all description.

His funeral took place Wednesday afternoon from his home in Roxbury and was conducted by Rev. Dr. Vincent of the Walnut Avenue Congregational Church, to which he transferred his membership several years ago. Many of his Medway friends attended. Interment was made at Forest Hills Cemetery.

Mr. Fisher enjoyed a deserved reputation as an honest man, and will be greatly missed by family, friends, and acquaintances.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

The class of '77 followed the suggestions of the committee in relation to holding reunions at Commencement time, and the secretary sent out notices that a reunion would be held on Monday, June 8, at the University Club, Boston. The members who attended were Gray, Hale, Hibbard, Jenney, Mudge, and Williston. Many regrets were received from those unable to attend. A social meeting and dinner was held, with no formal speeches. Kittredge was unable to attend, having had the misfortune to break his arm in an accident some weeks previously. He is rapidly recovering.—Swain has been recently appointed by President Roosevelt on the Commission of Inland Waterways, which is now a permanent body. He also received the degree of Doctor of Laws from New York University last year.

1878.

LINWOOD O. TOWNE, *Sec.*, Haverhill, Mass.

While thirty years has come around since graduation, the anniversary reunion will not be held till winter. Members of the class, however, turned out for the June 9 Pop Concert better than ever before. There were present: Baker, Bradford, Collier, Edwards, Higgins, Robertson, Rollins, Sargent, Schwamb, Williams, Towne. The experience at the concert was a new one for many of those attending, and a revelation of the change from '78 to '08, so far

as concerns graduation activity.—The secretary had the honor and pleasure of attending the complimentary dinner given June 6, at the University Club, to Professor Richards by old members of Course III. and others.

1885.

I. W. LITCHFIELD, *Sec.*, 88 Broad Street, Boston, MASS.

The '85 class dinner was held at the Hotel Bellevue, Saturday evening, April 25. Those present were: Bartlett, Fiske, Hildreth, Little, Litchfield, Morss, Pickernell, Pratt, Pierce, Plaisted, Rawson, Steele, Talbot, Worthington, and White. President Pickernell presided. Talbot gave us some very interesting and welcome news about the Institute, which was supplemented by Morss. Little told us something about the methods of formulating specifications for coal for the school board, and Plaisted described the new locks at the Charles River dam. The dinner was otherwise pleasantly informal, the conversation turning upon news from the absent ones. A. Tenney White, of Manville, R.I., was elected president for the coming year.

On the Monday following the class dinner several members of the class took advantage of Plaisted's invitation to inspect the engineering operations of the Charles River Basin Commission, for which he is electrical engineer. Plaisted showed us the operation of the locks and the drawbridges, and after an examination of the work at the dam the party took the commission's launch, and inspected the work as far up as Stony Brook Creek.

Everett Morss is now a member of the Corporation, having been elected by ballot of the alumni, and selected from the candidates thus elected by the Corporation.

Dave Baker was in town during June, to see Mrs. Baker and the children off for Europe.

F. H. Newell is one of the eleven members of the Inland Waterways Commission named in June by President Roosevelt. Professor George F. Swain, of the Institute, is also one of the members. In a recent number of *Harper's Weekly* appears a group of the

members of the Congress for Preserving our Natural Resources, which was recently convened by President Roosevelt at Washington. Among the few lay members who were present was Newell, who appears in the picture.

The Tech recently gave a dinner at the Westminster, to which all former members of Tech boards were invited. Mr. Little, who was present, suggested that a permanent organization of Tech editors be formed. The suggestion was carried out, and Mr. Little is chairman of a committee to make proper arrangements.

Judge John W. McKim, father of A. R. McKim, died after a short illness, June 9. Judge McKim was one of the oldest jurists of the State, and had reached the age of eighty-six years. His term on the probate bench extended for thirty years, during which time about 90,000 cases were acted upon. The *Transcript* says that probably no judge sitting in the Commonwealth was held in more affectionate regard than Judge McKim.

'85 joined with '86, '87, and '88 in a spread at the Brunswick on the evening of the Pop Concert. There were nine at the concert, which included Little, Frazer, J. L. Kimball, Merrill, Bartlett, Steele, Talbot, Homer, Pierce, and Litchfield.

1886.

PROF. ARTHUR G. ROBBINS, *Sec.*, Mass. Inst. of Tech., Boston.

'85, '86, '87, and '88 joined forces in the alumni meeting at the Brunswick on June 9, and went from there to the "Pops." The '86 men present were Anthony, Bartlett, Locke, Miller, Noyes, Robbins, J. M. Smith, and S. F. Smith.—Clifford has recently been elected a member of the board of managers of the American Institute of Electrical Engineers.—F. E. Foss and Miss Louise Rust were married June 10 at Cleveland, Ohio. Professor and Mrs. Foss will reside in Pittsburg, Penn.—The degree of Doctor of Laws was recently conferred upon Noyes by the University of Maine.

1887.

EDWARD G. THOMAS, Sec., 239 West 103rd St., New York, N.Y.

Todd has resumed the position which he formerly occupied of local manager of the General Electric Company at Baltimore.—Tripp is now connected with the Single Stave Barrel Company at 131 State Street, Boston.—Guild is news editor of the Boston *Globe*.—Draper has recently issued a résumé of his views on the pending questions of the day relating to the currency, labor unions, trusts, the tariff, socialism, in the form of a book of 250 pages entitled "More." He discusses the prevailing condition of affairs from the basis of his extensive manufacturing experience, and offers some suggestions for reform in currency and industrial matters. It is a most interesting contribution to the discussion of the problems which confront our country, and is worthy of attentive reading.

—The class assembled for its annual meeting and dinner at Young's on the evening of February 21 with the following attendance: H. S. Adams, W. H. Brainerd, H. F. Bryant, Cameron, Carpenter, Coburn, Crosby, Draper, Fish, Gerrish, Lane, Northey, Sears, Sever, Spaulding, Taintor, E. G. Thomas, Fred Thompson, Tripp, Very, Wakefield, W. A. Whitney, and Young. Draper, acting temporarily as toastmaster, called on Thompson, who in a few choice and fervent remarks presented to Jules Cameron a silver loving cup as a lowly token of our appreciation of his hospitality at Chebacco Island on the occasion of our twentieth celebration last June. After the usual reports of the secretary and treasurer the following officers were chosen for the ensuing year: president, H. S. Adams; vice-presidents, B. C. Lane and Fred Thompson. The evening was spent in a discussion of the educational policy of the present day, both of the public schools and of the Institute. The discussion was of such interest that a committee was appointed to meet and consider any suggestions that might be offered to it, with power to call upon the class to consider the wisdom of presenting such suggestions or the results of the committee's work to the Institute Corporation or Faculty.

1889.

PROF. W. E. MOTT, *Sec., Mass. Inst. of Tech., Boston, Mass.*

The class was unusually well represented at the "Pop" concert this year, more than a dozen men being grouped around the '89 table, including Crane and Smythe, who have not met with the class since graduation.—A. L. Davis now has his office in the Hudson Terminal, 30 Church Street, New York City.—Geo. C. Whipple, whose new address is 103 Park Avenue, New York City, recently addressed the Biological Club of the Institute upon the subject of typhoid fever.—W. H. Kilham is a member of the recently organized Brookline Improvement Commission. His firm received the commission to design the new Haverhill High School, which is estimated to cost \$275,000.—W. S. Johnson has recently made a report upon a new water supply for the city of Lynn.—Kilham & Hopkins have just been chosen by the new Chelsea Board of Control as architects for the first public building to be built since the fire,—a twenty-four room school-house.

1890.

GEORGE L. GILMORE, *Sec., Lexington, Mass.*

Colonel Hayden has recently purchased the steam yacht "Revolution" from F. Augustus Heinze. The "Revolution" was built in 1902.—C. W. Rice was a guest at the dinner of the engineers in Washington in May.—Messrs. Loring, Royce, and Hayden have been elected directors of the Lamson Consolidated Store Service Company.—Colonel Hayden, who has been a director of the Bank of the Republic, has now become a director of the Shawmut Bank, which has recently absorbed the former. Colonel Hayden is also treasurer of the Massachusetts Olympic Fund now being raised.—The address of H. C. Slater is Ridley Park, Pa.—Edward F. Bragg's address is now 17 Covington Street, South Boston, Mass.—Charles Neave's office address is 5 Nassau Street, New York City.—

Billy Poland is vice-president of the Philippine Railway Company, with headquarters at Manila, P.I.—Colonel Hayden is a director of the Utah Copper Company, as well as others too numerous to mention.—Arthur Adams is at 106 New Bond Street, London, England.—S. A. Moss has removed to Alameda, Cal.—Fred Royce's Boston address is 84 State Street.—The marriage has been announced of Rev. Willard H. Roots on Tuesday, April 21, to Miss Katherine Philip at Pullman, Wash., where Roots is rector of the Episcopal church.—Guy Emerson has been appointed superintendent of streets by Mayor Hibbard of Boston, and is undoubtedly well qualified for the position.—Mr. and Mrs. H. M. Goodwin will spend the summer abroad.—Mr. C. G. Abbot, the director of the Astrophysical Observatory of the Smithsonian Institution, delivered before the Washington Academy, March 24, an address on "Recent Studies of the Sun." Calvin W. Rice, secretary of the American Society of Mechanical Engineers, was a special guest of President Roosevelt at the Conference of the Governors in Washington, May 13 to 15, to discuss the Conservation of our Natural Resources. Mr. Rice has been assisting in this movement, and was instrumental in getting up a meeting of the engineering profession in New York, which was addressed by Dr. W. J. McGee, secretary of the Inland Waterways Commission, Professor Swain, Dr. W. F. M. Goss, and Dr. Henry S. Pritchett. Professor Swain has been especially active in this movement, and his services have been recognized by an appointment on the National Commission.

1891.

HOWARD C. FORBES, Sec., 88 Broad Street, Boston, Mass.

The class dinner was held at the Algonquin Club on Monday, June 8, at which eleven of the fellows were present: F. C. Holmes, Dana, Cunningham, Alley, Tyler, Jere Campbell, Trowbridge, Young, Garrison, Howland, and Forbes. Dana explained some interesting facts about the Chelsea fire. Garrison told about the progress with the choralcelo.

At the Pop Concert the next night the following were present: G. A. Holmes, Kimball, Capen, Bryant, Cunningham, Alley, Wilson, H. C. Bradley.

Edward Cunningham, the treasurer of Samuel Cabot, Inc., writes in regard to their plant, which was in the path of the conflagration in Chelsea on April 12 last:—

Our main plant consisted mostly of low brick buildings with tile roofs, supported by unprotected steel beams, although we had a few frame buildings.

We also had many tanks containing creosote, benzol, and coal and gas tar. There were also in the yard a large number of wooden barrels, either empty or containing coal-tar pitch.

Our plant was one of the last to catch fire, but finally the shower of sparks started the frame buildings, and then the flames swept through the whole plant, burning most of the combustible material.

The brick walls and tile roofs were mostly left intact, but where there was much combustible material in the building the unprotected steel beams collapsed.

The tanks in the yard were subjected to a fierce heat, so that a few collapsed; but the majority were but little damaged, and can be used again.

Our experience shows that tanks on solid concrete foundations with metal roofs and suitable vents are practically safe, and tanks containing even benzol were left unharmed, although standing within a few feet of tanks which were burned to the ground, owing to less perfect roof covering or foundations.

We have already made big strides in rebuilding, and with this experience feel that we can eliminate the chance of another serious fire in our plant.

Billy Dart is president of the Rhode Island Tool Company, and says:—

I don't know what I can say beyond the mere fact that the stockholders of the Rhode Island Tool Company had a brain-storm last February, and made me president at the beginning of one of the worst business years the country has ever seen, and now I am having brain-storms and cold feet and all sorts of nervous symptoms.

1892.

PROF. WILLIAM A. JOHNSTON, Sec., Mass. Inst. of Tech., Boston.

The following men were present at the banquet and "Pop" concert Tuesday, June 9: Bowen, Burnham, H. J., Carlson, Curtin, Derr, Dresser, Dudley, Fuller, Ingraham, Johnston, Marcy, Metcalf, Pettee, Wallace, C. F., Waterman, R.—The following article appeared in the Boston *Herald* April 15, 1908:—

Frank Edson Perkins, formerly of Boston, an architect, with an office in New York, has been awarded the first prize of \$5,000 for plans submitted for the proposed \$3,000,000 capitol building of San Juan, Porto Rico.

The competition came to an end and the awards were announced yesterday. Ritchie Abbott, of New York, received the second prize of \$2,000, and H. L. Beadel, of New York, the third prize of \$1,500. There were 135 competitors. The committee on awards was composed of American architects.

The winning design calls for a low dome over Greek Doric columns, the whole to be built of re-enforced concrete, with decorations of marble. Word has been sent to Mr. Perkins, who is at the present time in New York, to go at once to Porto Rico to confer in reference to contracts for the building, which probably will be erected in accordance with the prize-winning plans.

Frank Edson Perkins was born and educated in Boston. He graduated from the Massachusetts Institute of Technology in 1892, and at once went abroad. After eight years of travel and study he received his degree from L'Ecole des Beaux-Arts. He at once was made assistant professor of architecture in the University of Pennsylvania, where he taught for four years, meanwhile engaging in the practice of his profession in New York City. In 1902 he left teaching, and now conducts an office under his own name in New York. He has a mailing address and desk room in Boston, and visits this city several times a year for long periods.

His parents, Mr. and Mrs. Charles W. Perkins, live at 72 Westland Avenue, where their son stays when he is in town.

1893.

FREDERIC H. FAY, *Sec.*, 60 City Hall, Boston, Mass.

Somewhere in this chosen world, thousands of leagues from the marts of trade,—although the geographies claim that it is but six miles from the city of Lowell,—parting the scintillating waters of the Merrimack, is a beautiful island overrun with a rambling under-growth of charming vistas, where might be a wondrous golf course if one would take notice, and governed by a beneficent generation who have for years been devoting themselves to the beautifying of this lovely spot for the delectation of the class of '93 on the occasion of its fifteenth anniversary. From the piazza of the picturesque club-house, located at the northern end of the island, is a beautiful sweep of river and rolling country on one side, and on the other towering pines and shady lanes that make up the ninety acres of the Vesper Country Club's domains.

On the eventful morning of June 8 there was an unwonted stir just across the river, which evolved itself into the first delegation of the class alighting from the fast Canadian express, which had stopped under a spreading elm-tree for our special convenience. Those who alighted from the train were: Ashton and Whiston from New York; Dawes, Fay, A. L. Kendall, Keyes, Latham, Pickert, Taintor, with our guest, "Ike" Litchfield, '85, abducted for the occasion; also E. B. Carney, to whom the class was indebted for the hospitality of the club; and S. H. Brockunier, who came from Wheeling, W. Va., for the celebration. The delegation was met by official representatives from the Country Club, bearing the stars and stripes and the historic orange and black banner of the class of '93. From this point the island is reached by a suspension foot-bridge of remarkable design, with a span of 550 feet and a width of about 46 inches, which contorted itself into sinuous curves under the load of the '93 procession, as it wended its triumphal way. We have evidence to show, however, that its peculiar gyrations were due to the structure, and the word "load," as used above, should be invested with no ulterior significance.

According to programme we were at once assigned rooms, and soon the "Old Clothes Brigade" was mustered on the south piazza, whence a line of forced march was taken to the Bungalow, which, because of its peculiar attraction, became the centre of interest, and from this time on it served as the general headquarters. Here we were joined by "Billy" Page and Fred Dillon, who came over from Fitchburg, and by J. C. Abbot of Westford, Phinney of Warren, and H. R. Sargent of Graniteville. After the Bungalow had been officially dedicated to the services of the class, there was some frisking about after a pudding ball, until the arrival of the noon train, bringing Blood, who came over from New York, Crosby, Norris, and E. S. Page. Thereupon lunch was served on the north veranda, twenty-one men being then present. After lunch, during which Baxter joined the party, Crosby sounded the assembly, and there was a battalion drill under the command of Adjutant Phinney of the Freshman battalion. After a number of intricate evolutions, which included "counting fours," "right dress," "right-forward fours right," and some others, which were, by the way, faultlessly performed, the battalion marched the entire length of the island to a ball-field, which from that moment became famous. The memorable contest was between the "Cardinals," captained by Fred Dillon, and the "Grays," led by Jack Abbot, Litchfield being unanimously chosen as umpire because of his profound knowledge of the game. Although on the surface everything seemed amicable, there was much hot blood, for the sun was fierce, and the "Grays" might have given up the fight but for the brave and persistent effort of Captain Abbot, to whom success is perhaps as much due as to the impartial decisions of the umpire. The excitement caused by this game is still so vivid we feel that the details cannot be properly chronicled until they are set down more deliberately in our own class publication. During the game we were joined by Bemis, W. S. Forbes, H. R. Sargent, of Schenectady, N.Y., and Cadwell, of Nashua, N.H. One member had been drawn as a juror, but, when he told the court of his engagement with the class of '93, the venerable judge, recognizing the greater importance of this unusual celebration, allowed him a week's absence. This

illustrates the wisdom of the Massachusetts bench, not only in its recognition of the importance of the event, but in allowing four days to recover from it.

There was an "idle hour" at the Bungalow following the game, but not for the attendants. At this time S. A. Breed, sun-burned almost to a cardinal hue, joined the party, having made a canoe trip that day down the river from Manchester.

The fifteenth annual meeting of the class was held on the Bungalow piazza at 6.30 o'clock, with President Pickert in the chair. The usual reports were read and approved, and a class contribution to the Association of Class Secretaries was voted, and officers for the ensuing year elected as follows: Henry A. Morss, president; George B. Glidden, first vice-president; Edward B. Carney, second vice-president; Frederic H. Fay, secretary-treasurer; Leo W. Pickert, assistant secretary. The death by accident of Walter Sherman Whiting, on Nov. 2, 1907, was reported by the secretary, who read a memoir of Whiting which had been published in the January number of the REVIEW. It was voted to dedicate a page of the class record to Whiting's memory. The secretary reported progress about the forthcoming Class Catalogue, and, after a vote of thanks to the retiring president and secretary, the meeting adjourned with the announcement that dinner was waiting.

Having relieved ourselves of this weight of care, we marched to the attack under Phinney's command, escorted by a Lowell orchestra, with H. R. Sargent working overtime at the bass drum.

It was just at time of sunset. The snowy table was laid on the north veranda, partly in the open air. Around was the charm of river and country entering into repose at the close of day. From the further boundary of the lawn came the music of stringed instruments, and lighting up the scene were numerous flambeaux which made weird shadows among the trees. The menu provided by the steward was tempting and delicious, and the service everything that could be desired. In fitting connection with the caviar and onions, President Pickert introduced Litchfield, with his umpirical honors thick upon him, who presented the cup, offered by one of

the members, to the victorious ball team, in a very earnest and appropriate speech, explaining that it had greater significance than its weight of bullion and its ornate chasing, that it would be handed down to posterity, and that some time in the future a younger generation of the class of '93 would strive for and win it, as had the valiant "Grays." He announced that it was modelled after the famous America's cup, and that it would be suitably inscribed with the names of the victors. Jack Abbot accepted the cup on behalf of the "Grays," and, as he removed the cover and disclosed it to view, it was seen to be indeed a wonderful creation, for it stood about eighteen inches high and was made of a varied collection of tin cans soldered into an unsymmetrical whole. During dinner the orchestra played several Tech songs, which were sung with zest by the assembled multitude. When the game course was reached, the removal of the cover of a large platter in the centre of the table disclosed a game rooster wearing the class colors. The bird immediately hopped up, and, gazing about him, crowed vociferously. This being taken as a good omen, the class rose *en masse* and cheered long and loud, the rooster joining in with great heartiness. He then began a triumphal march up the table over dishes and glasses to the president's seat. The club will keep the bird, and next year he will be ready to meet the rooster of '94, should that class follow '93's precedent for a quindecennial outing, and feel "cocky" over it.

As the evening advanced, the piazza was prettily decorated by incandescent lights, installed for the occasion. Letters from absent members were read, including one from our former English instructor, Fred Parker Emery, now a professor at Dartmouth, who was the most popular teacher the class ever had. There was no formal speech-making, but Litchfield gave a heart-to-heart talk upon Institute matters, and many good stories were told.

Later on in the evening there was an "artful dodger" contest in the Bungalow to test the marksmanship of the party. Each man successively poked his head through a hole in the canvas, and the next man on the list had the opportunity of bombarding him with some very soft balls. Breed won the pool, making the best

score with a total of three hits out of a possible eight, which was very creditable for that hour of the evening.

Abbot and Forbes, who had come in their motor cars, had to leave that night, taking some of the fellows with them. The others sat in the moonlight of the warm summer's night until the arrival of A. L. Kendall, who had to go into Boston that evening on military duty.

Tuesday was another perfect day. The early risers began to appear between five and six, three or four fellows being obliged to leave on the early train. For those who remained the breakfast table was spread in the open air, and during the early morning N. P. Cutler, Jr., joined the party.

The forenoon was devoted to a general "schwatfest" competition for three prizes offered by two members of the class. It was a handicap game, each man's rating being determined by his score in a try-out on the first hole. Then the crowd started to play the whole course, certain men with the highest scores dropping out from hole to hole, until at the ninth hole only Brockunier and Carney were left in the running. Brockunier won out by a close margin, and he and Carney received the first and second prizes, which were silver cups suitably engraved. The consolation prize was a huge stein, and was presented to Keyes.

Luncheon was the final meal, and, like the others, was served out of doors. After giving hearty class cheers for the Vesper Country Club and its steward, who entertained us most handsomely, the "Old Clothes Brigade" disbanded, and came back to Boston by the White Mountain express, which stopped for our convenience at the end of the bridge.

The class had a good turnout at the Brunswick spread and at the Tech night Pop Concert, where a number of new men took the places of those who were unable to remain throughout the celebration. The following is a list of men who were present at Lowell or Boston, or both: I. W. Litchfield, '85 (guest); and J. C. Abbot, Ashton, Barnes, Baxter, Bemis, Blood, S. A. Breed, Brockunier, Cadwell, E. B. Carney, W. W. Carter, Crosby, N. P. Cutler, Jr., Dawes, Densmore, F. N. Dillon, Fay, W. S. Forbes, Keith, A. L.

Kendall, Keyes, Latham, Norris, E. S. Page, W. B. Page, Phinney, Pickert, Reynolds, Sayward, C. G. Sargent, H. R. Sargent, Soley, Taintor, Tucker, Whiston, Wilson.

Commodore Henry A. Morss of the Corinthian Yacht Club, who in his schooner yacht "Dervish" won last year's ocean yacht race to Bermuda, again has the distinction of being the winner in his class in this year's Bermuda race, which was started from Marblehead Harbor on Wednesday morning, June 3. Six boats entered the race in two classes: those of Class B being the schooners "Esperanza," "Dervish," and "Zurah," with ratings of 78, 75, and 70 feet, respectively; and the smaller boats of Class C, being the "Marchioness," "Venona," and "Edith Anna," rated at 57, 55, and 46 feet. Early in the contest the smallest boat, the "Edith Anna," was disabled and forced to return to Marblehead.

The feature of this year's race was the almost continuous heavy weather, which was especially severe when the boats were nearing the islands; and, while the larger boats kept to their course, the two smaller boats made a detour to the eastward to avoid the worst of the gale. This move was a particularly fortunate one for the small boats, for all of the Class B boats were held up by the storm, and both the "Venona" and the "Marchioness" of Class C came in on Sunday afternoon and evening ahead of their larger competitors. The "Dervish" crossed the finish line at 12.40 A.M. Monday morning, beating the other boats of Class B by nearly a whole day.

1894.

Prof. S. C. PRESCOTT, *Sec., Mass. Inst. of Technology, Boston, Mass.*

The annual dinner of the class was held at the Nottingham, Copley Square, on Monday evening, June 8. This was the first time for several years that the dinner was held on an evening other than the night of the Pop Concert. The result was a small attendance,—only eight men,—T. G. Richards, L. Tufts, M. S. Chace, R. B. Adams, W. H. Sayward, Jr., H. S. Duckworth, C. M. Lawrence, and S. C. Prescott. Although so few were present, the

dinner was a very pleasant and successful one, with many anecdotes of the old days at the Institute.

The principal topic for discussion was the celebration of the fifteenth anniversary of graduation in June, 1909. Those present at the dinner constituted themselves a central committee to consider the best method of celebration and to awaken enthusiasm among the other members of the class.

The plan most favorably received was one involving a visit to some hotel or country club, not too far from Boston, where sports of all kinds, such as golf, tennis, and baseball, can be indulged in, and a class dinner held in the evening. It was thought that such a class outing can be had at relatively small expense, and with opportunity for the fellows to get together for one or two days and renew old acquaintance, and have a general good time. The secretary will gladly receive suggestions from any member of the class as to how the ends sought may best be attained. There can be no question that we ought easily to get together from thirty to fifty men who would participate in such an outing, and it is hoped that all will approve the plan and work for its success. By beginning at once, plans can be perfected and a good time assured if the men will approve and co-operate. It cannot be expected that one man or a small committee can do the whole thing.

On Tuesday evening, June 9, at Tech night at the Pop Concert, fourteen '94 men attended; viz., Adams, Chace, Cheney, Duckworth, Ferguson, Jones, Lawrence, Lanigan, Phelan, Prescott, Richards, Sayward, Weston.

The class was the first to enter Symphony Hall, and the old '94 cheer was given for each of the first six or eight classes to follow. The plans for reunion next year were still further discussed, and all were enthusiastic in approving the general plan, and offered cordial support. The evening was a very pleasant one, and in reality served as a continuation of the meeting of the evening before as well as an event by itself.

A number of members of the class were unable to be present, and sent pleasant messages. Piper sent a telegram from a camp in Canada, where he is on a fishing trip. King sent a characteristic

cordial message, stating his intention to be on hand next year. So, also, did Locke, H. M. Chase, MacClure, S. G. Reed, Robb, and a number of others.—The class will sympathize most sincerely with Claflin in the loss of his father.—H. W. Gardner has, within the past few months, become a proud parent, John Wentworth Gardner being the name of the new arrival.—J. C. Locke also reports the advent of a young son, John. May he be as husky as "Calvin," whose prowess is a part of '94 history.—H. N. Parker was in Boston for a few days about June 1. After several years of field work at different stations, Parker is now assigned to office work in the Geological Survey in Washington. For about two years he has been engaged in a study of rivers and water supply resources in Kansas.—H. R. Batcheller drops in at the Technology Club occasionally. "Batch" is engaged in mining engineering and chemistry in Maine, and has had occasion to do a great deal of original work and investigation in determining the proper treatment of some ores of relatively rare occurrence.—The secretary recently received the latest report of the Astrophysical Observatory of the Smithsonian Institution, an imposing volume, consisting almost entirely of the reports of investigations by C. G. Abbot and F. E. Fowle, Jr., on a variety of topics.—Robb writes pleasantly of his business and private affairs, reporting the advent of a young daughter, Kathleen, on February 15, and states that he is also mayor of Amherst, N.S.—Frank Drake now has his offices in the Tacoma Building, Chicago.—S. G. Cousins is at Cacamonga, Cal.—R. H. Ober's headquarters are at 605 Colman Building, Seattle, Wash.—J. C. Kimberly is in business at Neenah, Wis.—C. H. Johnson is in government service at Egmont, Fla.—The secretary wishes to express his regret that he has been so lax in his duty in sending notes to the REVIEW. While there can be no doubt where most of the blame should lie, he would like to add that co-operation is always desirable, and that news is always welcome. Even though in close proximity to the Alumni Office at the Institute, the personal notes which are of greatest interest are frequently those which come by a letter rather than through official channels. If those who have been inclined to criticise will assist, the secretary will attempt to turn over a new leaf.

1895.

CHARLES H. PARKER, *Sec.*, 39 Boylston Street, Boston, Mass.

A meeting of the class of '95 was held June 20 at the American House, there being present Hanna, Hurd, Booth, Sias, G. F. Shepard, Moore, Carlton, Parker, E. H. Clapp, W. T. Hall, Jones, Churchill, and Barrows, with President F. A. Bourne in the chair.

The reading of the records of the previous meeting was dispensed with.

The chair appointed Messrs. Hurd and Carlton to act as nominating committee for the class officers for the coming year. The following nominations were made: for president, F. T. Miller; first vice-president, E. H. Clapp; second vice-president, H. M. Haven; secretary-treasurer, C. H. Parker.

It was voted that the secretary be instructed to cast one ballot in favor of these nominees, and this was accordingly done, and the above men chosen for the several offices for the year.

A report was received from the Huntington Hall Panel Committee by the chairman, Bourne, who told of the completion of the four panels in the Huntington Hall frieze, and that they were to be unveiled by the class of 1908 on their class day, June 8.

It was voted that the class secretary be instructed to pay an additional sum not exceeding \$10 of bills in connection with the completion of the '95 panels in the Huntington Hall frieze, for which the sum of \$100 was authorized by vote of the class June 5, 1906. The following resolution was then unanimously passed:—

Resolved, That the class of 1895 of the Massachusetts Institute of Technology hereby express its appreciation and thanks to the instructors and students of the Architectural Department who had to do with the execution of the four panels just completed, especially to Mr. W. Felton Brown for his able, enthusiastic, and successful direction of the students in their work on the frieze.

A committee, consisting of Messrs. Shepard, Sias, and Booth, was appointed by the chair to make arrangements for '95 at the Pops on June 9.

A report of the class constitution committee was received from Messrs. Hall and Barrows, and various articles as recommended by the committee taken up and discussed separately. It was voted to adopt the following

CONSTITUTION OF ALUMNI, CLASS 1895, M. I. T.

Article 1. Membership.

All students who have taken a degree with the class shall be considered as members, and all students who have appeared upon the records of the Institute as taking one or more subjects with the class shall be considered members except when electing otherwise.

Article 2. Officers.

The officers of the class shall consist of a president and a secretary-treasurer.

Article 3. Duties of Officers.

The president shall preside at all class meetings and in general perform the duties pertaining to such an office. The secretary shall keep all records and official papers of the class, and shall have charge and keep an account of all property and funds, and shall make a statement of such accounts to the class before each election of officers. He shall send notice of meetings to all members of the class at least two weeks in advance of said meeting. He shall see that the class is properly represented at all general Institute gatherings and in the Class News of THE TECHNOLOGY REVIEW, which magazine shall be the official organ of the class.

Article 4. Elections.

An election of officers shall be held once every three years by letter ballot. The president and secretary shall act as a nominating committee for the class officers to succeed them, preparing the letter ballots. The ballots shall be sent to all members of the class, and the polls closed the day before the annual meeting.

Article 5. Meetings.

Class meetings shall be held at the discretion of the secretary, and the annual meeting within seven days of graduation day at the Institute.

Article 6. Assessments.

The secretary shall levy assessments upon the members of the class to provide class funds.

Article 7. Amendments to Constitution.

The constitution may be amended by two-thirds vote of members replying to a notice sent to all members of the class one month in advance.

A report was called for from the trophy committee appointed Feb. 4, 1908. No members of this being present, the committee was continued.

The meeting then adjourned.

The following men were present at the Alumni Association and class spreads at the Brunswick and also at the "Pop" Concert afterwards: F. A. Bourne, Barrows, Cutter, Dean, Defren, Eveleth, W. T. Hall, Loring, Newell, C. H. Parker, Rockwell, G. F. Shepard, Sias, Tillinghast.

After marching in with the class banner, one, Sias, opened a few bundles, and proceeded to get into operating condition on an electrical "klaxon," or motor-driven automobile horn. With this to lead the cheering, I am sure it was evident to every one that '95 was present and in good form.

During the first intermission some thousands of slips were thrown from the second balcony by eight of the class stationed there. These slips read:—

'95

13TH GREETING

Here is to your good health and your families,
May they all live long and prosper.

Joe Jefferson.

Those present had a good time, and only regretted that we did not have more of the class present.

The class secretary wants to say to all members of the class of '95 living at a distance from Boston that, if they will mail him a postal

when they travel this way, he will be happy to do what he can to make their stay here pleasant by arranging meetings with classmates, etc.

1898.

PROF. C.-E. A. WINSLOW, *Sec.*, 157 Walnut Street, Brookline, Mass.

The decennial celebration of the class of '98 began with a dinner in the Dutch Room of the Copley Square Hotel on Monday, June 8, at 6.30 P.M. A copy of the Decennial Class Book was at the place of each member. After a photograph had been taken of the entire aggregation, the provender was attacked, its destruction being accompanied by much cheering and singing (?). A visit from 1904, signalized by the presentation of a box of cigars, made the occasion particularly memorable. After the repast, Winslow made a few husky remarks, and introduced Godfrey as toastmaster. Major Bigelow, the honorary member of the class, gave the least informal speech of the evening, dwelling on the glories of war and mighty armaments. Godfrey then called on each man present for a 10-minute address, enforcing the expiration of the time by the vigorous use of a gavel in the shape of a '98 class cane (L. D. Gardner, chairman). If it cannot be said that all the speeches were eloquent, it is certain that all were frantically applauded. Gardner's memory book was meantime passed about, and recalled many fond recollections of the cane rushes, the election nights, and the other joys of happy boyhood. The following were the genial rioters who took part: Major Bigelow, Allyn, M. V. Ayres, E. R. Barker, Bennink, Blanchard, Bragg, Brewster, Butcher, Chapin, Coburn, Coombs, Cottle, Curtis, Daly, A. L. Davis, Davison, Dawes, Delano, Dodd, Edgerley, Gardner, Goddard, Godfrey, Goodrich, Howard, Humphrey, Hurter, P. F. Johnson, Lansingh, C. E. Lord, Marshall, Nelson, Pease, Perley, Perry, Porter, Richmond, Riley, Roberts, W. A. Robinson, Russ, Seidensticker, H. T. Smith, Stillings, Tew, Treat, A. H. Tucker, Wadsworth, C. F. Wing, Winslow, and Wright.

Tuesday, June 9, bright and early, the gang proceeded to Winchester, and took possession of the Winchester Country Club. Butcher and Richmond and others got very warm on the tennis courts. Wright learned to play golf, Chapin and many more tried to play golf, and it is said that Godfrey, Tew, and Lansingh really did play. The total number of lost balls was 2,831. A chicken luncheon was served with great éclat, and soda-water bottles popped joyously. Another photograph was taken by Barker, aided by Andrew Carnegie and three caddies. Treat and a sedate party played bridge. At 4.35 P.M. the assembly (minus the Aristocrats, who had left earlier by motor, and the golf fiends, who remained to lose their remaining balls) proceeded to Boston by special car. Besides most of those who had been at the dinner, Butterworth, Cornell, Dana, and C. F. Smith were included in the Winchester party. The special was decorated with cardinal and gray, and sounds of revelry were heard to proceed from it, particularly in the neighborhood of Harvard Square. On the trip, prizes for the day were awarded as follows: first prize, for the biggest bluffer, W. Brewster, a medicine ball; second prize, for the hardest knocker, G. W. Treat, a baseball bat (nearly new); booby prize, to F. B. Perry, a golf ball.

Our arrival at the Brunswick was apparent to all. Once there, we maintained a spirit of cordial good fellowship with almost all the other classes by marching through their domains in lock step, and by cheering them collectively and individually. We enjoyed our own punch bowl and that assigned to '97. We paid a visit to Rogers steps, where we were joined by the glorious youngsters of 1908. At the Pops we displayed our banner far above any other class, and presented the conductor with our usual token of appreciation. *Sic transit Gloria Decennii.*—A. W. Tucker couldn't come to the reunion. He was married on June 3, in Boston, to Miss Amy Susan Bradford, daughter of Mrs. George Sanford Bradford.—Putnam wasn't there, either. He was married on June 10 at the First Baptist Church, Fall River, to Miss Helen Preston Haughwout, daughter of Mr. and Mrs. Velona Winant Haughwout.—The following extract from the '98 Decennial Book may have some interest outside the class:—

CLASS STATISTICS

Statistics in regard to salary were furnished by 185 men, about half the class. The aggregate amount of money paid annually to these 185 men is \$558,260, an average of \$3,018 per man. The median salary is about \$2,200, and the distribution of salaries by groups is as indicated below:—

Salary.	Number of Men
\$500- \$999	2
1,000- 1,499	19
1,500- 1,999	44
2,000- 2,499	41
2,500- 2,999	12
3,000- 3,499	22
3,500- 3,999	7
4,000- 4,499	14
4,500- 4,999	6
5,000- 5,499	4
5,500- 5,999	1
6,000- 6,499	2
6,500- 6,999	1
7,000- 7,499	0
7,500- 7,999	2
8,000- 8,499	1
10,000 and over	<u>7</u>
	185

The average salary, \$3,018, is good, and compares well with \$1,989, which was the average figure four years ago. A very notable fact is the large number of high-salaried men. Of the 185 reporting, 38, or 21 per cent., are earning \$4,000 or over; 7 men, or between 3 and 4 per cent., are earning \$10,000 or over. The extreme salaries reported are \$15,000 and \$25,000. These facts show the fallacy of the view sometimes advanced that technological institutions do not train men for the higher administrative positions.

The breadth and cultural value of Technology training is also well illustrated in the comments of some of the men who have followed non-professional lines. Thus Lambert, M.D., says: "After nearly nine years of the application of science in the art of healing, I still feel that perhaps the most valuable part of my training came from the Institute." Harris, who is stock-raising, says: "Even though he does not follow his profession, the habits of thought and the methods of work and the self-reliance gained in any course at Tech will be of great value to the student in after-life, whether he manufactures ice, builds houses, or runs a farm." Gardner,

who is advertising manager for *Collier's*, writes that "the work that I did with Dr. Dewey in Course IX. helps me every day of my business life. It is, to my mind, after ten years of business experience, the best training a business man could secure in any academic institution."

Of 170 men who report as to their conjugal condition, 143 are married, and these 143 report 155 children,—78 girls and 75 boys. Four years ago only 54 offspring were recorded.

1899.

HERVEY J. SKINNER, *Sec.*, 93 Broad Street, Boston, Mass.

A good number turned out at the alumni spread and concert on June 9, 1908. Those present were W. O. Adams, K. M. Blake, E. H. Hammond, J. L. Hern, H. G. Johnson, W. A. Kingman, T. F. Lennan, R. W. Loud, H. S. Mork, T. C. O'Hearn, G. H. Perkins, B. R. Rickards, E. R. Sheak, H. J. Skinner, J. L. Tufts, W. C. Whitney.—The class dinner was omitted this year in order not to detract from the plans of the association which were tried this year as an experiment. A class dinner will be held in the early part of the winter, and plans made for next year's celebration, which will be our tenth anniversary and which comes at the same time as the second big alumni celebration.—Lennan was in Boston during June. He is engaged in mining in Webb City, Mo.—Winslow has recently taken a position as superintendent with Hinman & Sproul, contractors. They are engaged in highway and sewage disposal work in New York state.—Corse was elected president of the Detroit Foundrymen's Association, a newly formed organization. In June he attended the American Brass Founders' Association Convention at Toronto, of which he is a vice-president. The following changes of address have been received: J. B. Ferguson, Ohio Electric Railway Company, Lima, Ohio; E. T. Hildreth, Box 586, Coeur d'Alène, Idaho.; Henry P. James, 930 New Onon Bank Building, Syracuse, N.Y.; Edward Johnson, 670 Pacific Electric Building, Los Angeles, Cal.; Carl S. Milliken, Gould Cottage No. 3, Tucson, Ariz.; W. Scott Matheson, 526 Broadway, N., Seattle, Wash.; F. A. Watkins, 407 Laurel Avenue, Highland Park, Ill.

1900.

H. E. Osgood, *Sec.*, Room F, Chamber of Commerce Bldg., Boston.

Nineteen Hundred was well represented at the Brunswick spread and the Pop Concert the evening of June 9. The idea of the various classes having rooms set apart for headquarters or assembly rooms is a good proposition, as the members of each class were immediately in touch with classmates. It likewise permitted of visiting and locating members of the other classes. The general spread was not, however, so successful, as the stand-up luncheon, with a great many to be fed and all desirous of eating at the same time, developed some confusion and crowding.

There were present, as noted by the secretary, L. B. Jennings, Dick Wastcoat, Learnard, A. C. Walworth, Jr., Percy Ziegler, Walter Kattelle, Herbert Howe, Lewis Emery, "Bill" Everett, Stanley G. H. Fitch, Graff, Elbert Allen, and Paul R. Brooks. A good time was enjoyed at the "Pops." The classes generally formed in line and marched out Huntington Avenue to Symphony Hall. The balconies were well filled with admiring friends and pretty faces, and formed a brilliant and happy setting for the assembled Tech men on the floor. The evening passed with music and song, interspersed with class yells. The usual enthusiasm and confetti were in evidence, and all went home feeling that the 1908 reunion was worth while.

The class voted not to combine the regular ten-year reunion with the Grand Tech Reunion of next year. The same officers as served last year were elected for the ensuing year. It was decided to hold an outing at Nantasket Beach, June 20, 1908. Leave Boston on the 3.20 boat, Rowe's Wharf, arriving at Pemberton for dinner at 5 P.M., thence by trolley to Nantasket Beach and Paragon Park for the evening. An enjoyable time is anticipated.

The secretary has received the announcement of the wedding of J. P. Draper to Mary Glen Fling at Philadelphia. The class extends its best wishes to the happy couple, and it is to be hoped that a bigger, better, and busier Draper will, at some future date, be

prominent in the affairs of the Institute.—A letter from Paul Price has been received. He is with the American Bridge Company, New York office.—Several changes in address have been received and noted, and it will be a pleasure to furnish any address desired by members of the class.—Paul Brooks and S. G. H. Fitch are associated together in a business enterprise at Peabody, Mass. The Machine Sales Company is fortunate in having Paul Brooks as general manager and S. G. H. Fitch as assistant treasurer. We wish them success.—A letter from Herbert Keay, of the Department of Railways, McGill University, Montreal, was received by the secretary some time ago. As several members of the class are mentioned, it will undoubtedly prove interesting. It reads as follows:—

One evening last July I was most royally entertained at Gerald Frink's beautiful home on the Lake Washington side of Seattle, on which occasion we "swapped" Tech news and lived over some of our experiences in Bean Town, pleasant and otherwise. Gerald, as superintendent of the Washington Iron Works, has certainly made good, and I may add that his young son Jimmie is a very promising candidate for the class of 1925 M. I. T.

The other members of the "Seattle bunch" have followed various paths, but all have given good accounts of themselves as Tech men.

Al Schmidt is doing very well in the hoisting machinery business in Chicago. I didn't see Leonard to verify or disprove his declaration that he is becoming hairless and fat. Bill Hough and Angus also narrowly escaped a call from me.

At Steelton, Pa., I was denied the pleasure of gazing once more on Steve Badlam's genial and bewhiskered countenance, from the fact that his duties as assistant superintendent of the Merchant Mill of the P. S. Company made serious inroads upon his erstwhile observance of the Sabbath Day, and that was all the time I had.

While I met a large number of Tech men in various parts of the continent last summer, only a very few were of our class.

As for myself, I am still holding down an Assistant Professorship in Mechanical Engineering here at McGill University, with some fairly definite and satisfactory prospects in view along the lines of railway work.

1901.

R. L. WILLIAMS, Sec., 30 Waban Hill Road, Chestnut Hill, Mass.

The class took part in the class spreads at the Brunswick, Tuesday, June 9, and then marched up to the "Pops," where we assisted in the good time and celebration. Before leaving the Brunswick, a brief business meeting was held, and the following officers elected for the coming year: president, A. W. Rowe; vice-president, F. W. Freeman; secretary-treasurer, R. L. Williams; executive committee, M. C. Brush and W. S. Pepperell; assistant secretary-treasurer, N. L. Skene. March 19 an informal dinner and smoke-talk was held at the Technology Club. Mr. Charles P. Burleigh, of the General Electric Company, gave an extremely interesting talk on the steam turbine. The talk was illustrated with lantern slides. The fellows received some very valuable information and had a pleasant time. Eleven men were present.—The marriage of Miss Lillian Viola Jacobs, elder daughter of Mr. and Mrs. Joseph R. Jacobs, of West Berlin, and Howard Trueman Chandler, of Boston, took place Tuesday, June 2, at the home of the bride's parents. About fifty relatives and friends were present. Immediately after the reception Mr. and Mrs. Chandler left for a tour through the West, where they will visit relatives and friends in Kansas City, Los Angeles, Ely, Nev., Schuyler and Italyric in Nebraska, and Pittsburg, stopping *en route* at the Grand Cañon, the Yosemite Valley, San Francisco, Colorado Springs, and other points of interest. Mr. Chandler is assistant superintendent of the Walter Baker Company, chocolate manufacturers.—James Bradford Laws was married on June 3 at Herkimer, N.Y., to Miss Margaret Hildreth. They will be at home after September 10 at 3003 Reading Road, Cincinnati, Ohio.—Henry Bishop Chalmers was married June 2 to Miss Josephine Louise Gardiner, at Quogue, L.I., N.Y.—Word has been received from W. S. Pepperell of his engagement to Miss Gertrude Marie Arnold.—Henry W. Chambers is now assistant engineer, Department Company Forces, New York Central & Hudson River Railroad. He has spent a year since graduation

travelling in Italy, Tunis, Algiers, Turkey, France, and England.—John R. Brownell is assistant engineer for the Pennsylvania Steel Company. He has three children.—Salvador Madero is married, and manages three rubber factories in Coah, Mex.—LeRoy M. Backus writes he is vice-president of the Northwestern Contract Company, treasurer Washington Lumber and Timber Company, president Wapato Irrigation Company, cashier Washington Bank of Seattle, and director of the National Bank of Commerce. Judging from his numerous offices, he must be a very busy man. He was formerly president of the Alaska Coast Company, operating steamers in the Alaska service. In this connection he made an extended tour of the southern coast of Alaska as far as Cook's Inlet and Kodiak during the summer of 1907.—F. S. Clapp, in an interesting letter, writes that during the past winter he has been working for Uncle Sam on a geological survey of Florida, with the object of preparing reports on the geology and artesian waters of that State. "For a geologist," he says, "there are hundreds of miles to travel on 'express trains' which run, Dixie fashion, on an average of fifteen to twenty miles an hour, there are towns fifty miles or more from the nearest railroad that must be reached in a single day by continuous driving with a team of mules through deep sand. When the floods come, as they have frequently in West Florida during the past few months, there are rivers to ford with the water above the buggy seat, or with the alternative of driving twenty miles to a town on the same side of the stream." At present he is located in Washington for a year to get the data of his trip in shape for publication.—The following changes in address have been received: L. R. Henrich, 220 Devonshire Street, Boston, Mass.; P. F. Goodwin, 35 Saunders Street, Allston, Mass.; P. L. Buxton, 13 Southgate Street, Worcester, Mass.; H. A. Putnam, J. A. Roebling's Sons Company, Trenton, N.J.; S. A. Clark, Fort Niagara, N.Y.; A. P. Trufant, 16 Linden Street, Whitman, Mass.; P. A. Potter, 260 W. 72d Street, New York.; E. B. Cook, 718 King Street, Pottstown, Pa.; E. P. Burdick, 1011 Hibernia Bank Building, New Orleans, La.

1902.

F. H. HUNTER, Sec., 75 Park Street, West Roxbury, Mass.

The sixth annual meeting and dinner of the class was held at the Copley Square Hotel on the evening of June 8. Dean Burton was the guest of the evening, and gave a splendid talk on the development of student initiative at the Institute. At the business session a provision for life membership was voted, and the board of officers was unanimously re-elected to serve another year. During the evening, visits were exchanged with the class of '98, and the new "coyote yell" was tried out upon them with satisfactory results. Letters from a number of fellows in distant parts of the country, called out by the recent class record, were read.

On Tuesday several men put in the day at the Highland Club. Bowling, tennis, and pool were in order. The spectacular manner in which the "Heavy-weight Team," led by Chalifoux, always managed to lose on the alleys was the feature of the day.

At the Brunswick, where all classes united in a supper and each maintained a punch bowl, Naughty-two was in the limelight. An invitation to all hands to "Come in and have ONE" from our bowl was hung without our door, and they *came*. With twenty-five men on hand, '02 had the largest delegation between '98 and '06.

At the Pops the class was on deck, doing creditable work in singing and shouting. The confetti thrown from the balconies—a Naughty-two scheme, by the way—showered on all alike, but much of it found a distinguished resting-place on the head of Chalifoux, the genial. The men attending some or all the functions were: Ames, Boardman, Chalifoux, Collier, Daly, Fitch, Fletcher, Gardner, Greeley, Hall, Hooker, Hunter, Magrane, Millar, Mitchell, Jason Mixter, Moore, Nickerson, Sawyer, Starr, Stillings, Thurston, Wemyss, Westcott, Wetherbee, Whittet, and Irving Williams.

Since the issue of the Class Record the following notes have been received by the secretary. W. V. Morse was married in November of last year to Miss Edna A. MacRoberts. His location as given in the record book is correct.—Rayne Adams was married on the

1st of last May to Miss Janet Rimsa, of New York City.—Shedd is with J. R. Worcester & Co., structural engineers, 79 Milk Street, Boston.—Bartlett has returned from Europe, and is now located with Allen & Collins, architects, Boston. His home address is 63 Fenwood Street, Roxbury, Mass.—His travelling companion, James McF. Baker, who returned to this country earlier, is with Cram, Goodhue & Ferguson, of 170 Fifth Avenue, New York, the architects of the new West Point Buildings.—Arthur More and his wife have returned from an extended wedding trip, on which they visited not only Western Europe, but Turkey, Greece, Asia Minor, Syria, Palestine, and Egypt. More is again "maintaining the way" for the C., C., C. & St. L. at Wabash, Ind.

1903.

F. A. OLMS TED, *Sec.*, 93 Broad Street, Boston.

An informal dinner of the class was held Friday evening, April 25, at the American House. Aldrich, Atwood, Bartlett, Clark, Gleason, King, Newman, Olmsted, and Swett were present. The annual dinner of the class was held at Hotel Bellevue, Saturday evening, June 6. Aldrich, Atwood, Clark, Gleason, Gould, Haddock, King, Loughlin, Merrill, Newman, Olmsted, Ricker, Swett, and Tolman were the faithful men present. Greetings were read from Cheney, Cox, Eaton, Hunter, Joyce, and Nibecker. Loughlin and King, with the assistance of a piano, which only had a few notes which would not sound, furnished music, which added much to the pleasure of the evening. Those who could not be present missed a good time. Seventeen men from the class were present at the spread of the class at the Brunswick, Tuesday, June 9. At the "Pops" five other men joined them, and the class did its full share in the celebration. Sashes, on which were stamped the class numerals, were worn by the men; and a large banner was hung on the balcony over the tables occupied by the class. Confetti, bearing the class numerals, were showered from all parts of the hall simultaneously, and fans bearing the numerals were very popular among the ladies. Every mem-

ber present considered the event a great success, as far as our class was concerned.—Bateman writes that he was presented with a son, William McCullough, April 20.—Morse has left the United States Reclamation Service, and is now with the Commissioner of Sewerage at Louisville, Ky. His address is 602 Edgewater Building, Louisville.—The following are other changes of address that have been noted: Ancona can be reached at 3 Emerson Street, Rochester, N.Y.; Chase is at the New York Central Office, Weehawken, N.J.; Colgan is with the Western Electric Company in New York; McIntosh, 176 Prospect Avenue, Milwaukee, Wis.; Fogg, State College, Pa.; Low is with C. H. Huff at 60 India Street, Boston; Moies, 161 Main Street, Pawtucket, R.I.; Winchester, 1210 Penobscot Building, Detroit, Mich.; Craven is a civil engineer in Ogden, Utah; Asbury is at 302 N. College Street, Charlotte, N.C.—Bradshaw writes that he has been in Mexico for eight months. He returned the last of April, spending a week in Mexico City and two days in Havana, also a week at an hacienda in the State of Zacatecas. He is now at 688 Nostrand Avenue, Brooklyn, N.Y.—At least two of the members of the class would like to obtain copies of our Senior Portfolio. If any member knows of one which is available or has one he is willing to dispose of, please inform the secretary to that effect.

1904.

R. A. WENTWORTH, *Sec.*, Saylesville, R.I.

M. L. EMERSON, *Res. Sec.*, 161 Devonshire Street, Boston, Mass.

Under the management of Tammie Rockwood and Dick Hartshorne we had a dinner at the Technology Club on May 1 which was a great success. Between twenty-five and thirty men were present, and the affair could not have been more enthusiastic. Dean Burton gave a rattling good talk on the reforms which President Noyes is carrying out and their relation to the different undergraduate activities. H. W. Hoole ('08) spoke on undergraduate affairs from the student's standpoint. Harry Stevens summed up the evening's

speeches thus: "The undergraduates at the present time seem to have the Faculty on the run." This year's Commencement arrangements were discussed. It was decided to have an outing down the harbor some Saturday afternoon this summer, accompanied by baseball, etc. Galusha, who is chairman of the committee for our Five-year Reunion next year, got after the fellows on that subject, and aroused considerable interest.—On June 8, we had our Fourth Annual Reunion at Bova's Café, Boston, in company with '05. Altogether there were thirty-eight men on hand, about equally divided between the two classes, so that the showing was equally discreditable. We had a very good dinner and a very good time. There was no talk except that which the secretary evolved at a brief business meeting before the dinner. We were entertained by vocalists of the café staff, assisted and encouraged by the crowd. Butts ('05) did some solo dancing which revived memories of old Tech Show rehearsals. His costume was of restaurant linen, cut *à la* table-cloth.—On June 9, '04 spread with '05 and '06 at the Brunswick, and assisted slightly at the "Pops." Twenty men were out, four of whom stuck to the gallery.—Letters asking men to serve with Galusha on our committee for the big reunion have brought out enthusiastic replies. If the men live up to their letters, we shall have a reunion which it will pay you to attend.—Trowbridge writes on the business stationery of "Barbour & Trowbridge, Insurance and Real Estate, West Newton, Mass." He says that real estate business is good, and somewhat easier than selling mines, which he was doing in Mexico for a couple of years.—Bouscaren writes from Stone & Webster's office in Tampa, Fla., where he has been for some time. His reason for not coming up to our dinner in March was, "Ain't got the sixty cents."—Sweetser is still with Stone & Webster, and is now back in Boston, though the Register of Graduates puts him in Kentucky.—Galusha has gone to Europe for a trip of several months.—Pete Underhill writes from Crockett, Cal.: "I have no news except that I am still unmarried, heart-whole, and care-free. Am slowly becoming a native son of the Golden West, and my water tubes are getting coated with scale from drinking hard water. I am still a total abstainer, although there are twenty-

two saloons on the main street, which is not over two hundred yards long. Have met quite a number of Tech men in 'Frisco, including Tommy Atkins and Nickerson of '04, and expect to see them again on May 2 at the annual dinner of the Technology Club of Northern California, the latest alumni organization."—A letter of mine addressed to Selskar Gunn in Boston is answered from Orange, N.J., thus: "Your address book is away behind the times. I left Boston in June, 1906, and was out in Iowa until the end of last month, when I accepted the position of health officer to the city of Orange, where I am now located."—A letter to Paul Paine found him still in the Government Forest Service at Burke, Ida., whence this: "I am at present up in the wilds of Northern Idaho, and do not expect to return to Washington till October. I intend to be at the reunion if I have to walk to it."—Willard was in Boston for some days at Commencement time, having come up from Washington ahead of time to "see that Pirie and Kramer got properly started on their matrimonial careers." He and Mrs. Willard are planning a good vacation in Maine.—Fairfield and Dow are in business together on contracting work at Mineola, Long Island, N.Y.—Goldthwait is on the business end of some summer camps in the South.—Stetson writes from Pittsburg, bemoaning the scattering of the big bunch of '04 men whose first flight landed them in that city.—Mert Emerson is the alumni member of the recently formed Advisory Committee on the Tech Show.—It is reported that S. A. McClung, Jr., is doing finely at law in Pittsburg. I think that he is with the firm of Chantler, McGill & McClung in the Park Building.—Had a good letter from George Powell awhile ago. He said in part: "I wish I could tell you of some of the fellows, but there are none around here since Harry Noyes left about a year or so ago. He promised to write me, but never did so. Tammie Rockwood came in to see me one day last winter, and it was good to see him again. Personally, I have little or no news. Being neither engaged nor married, I'm sort of out of the swim with the rest of the class. Still, I'm enjoying life and doing fairly well."—Holcombe writes from Washington: "Charley Haynes and his younger brother were down here the week after Easter, and livened things up for a spell,—put a spell

on the jolliest girl in the bunch, too, our prize exhibit,—but aside from this outburst our serenity, or lethargy, has been undisturbed. I will take that back. I was called out about midnight one Sunday by the cries of 'Extra!' reverberating through the streets, and, to quiet the fears of the white-robed women huddled in one room, sallied bravely forth to find out who had shot the President; and what do you think? The long defunct Chelsea was the cause. That shows how totally stagnant we are when we have to depend on Chelsea for our thrills. A couple of weeks more, and we shall be having our final exams. at George Washington University Law, and yours truly will be able to relieve his overburdened mind and plan how he shall spend his month's leave." He mentions the lack of spirit among Tech men in Washington, but our own recent showing has been so rotten that I don't dare to quote his letter.—Tommy Atkins is coming home from San Francisco on a visit in August, and is going to try his best to get to Boston in June, 1909.—Cap Curtis is at Palmer, Mass., for the summer, looking after five State highway contracts.—Boggs writes from Chrome, N.J.: "I work mostly at night, from six in the evening until seven in the morning, and consequently have little time for outside work."—J. F. Blackie is with the Milwaukee Coke & Gas Company, Milwaukee, Wis.—A. D. Smith is doing private chemical and engineering work as a specialist on petroleum refining in addition to his duties as superintendent of the Coraopolis (Pa.) works of the Canfield Oil Company.—From G. M. Homans: "Have just returned from an administrative trip through South Dakota, Montana, Idaho, Washington, Utah, and Colorado. Had some fine snowshoe trips, especially the one from Montana across northern Idaho, following approximately the route of the old historical Indian trail known as the Lalo trail. Object was inspection of the right of way of the Chicago, Milwaukee & St. Paul R.R., which is now in the final stage of completion."—Under heading of "Cessna & Goddard, Reinforced Concrete, Engineers and Contractors, 178 Devonshire Street, Boston," Goddard writes: "A line to let you know that I have severed my connection as engineer, general superintendent of construction, for the Boston branch of the Concrete Steel

& Tile Construction Company, and am now engaged in an engineering and contracting business with F. W. Cessna, formerly chief engineer of the Boston office of the Trussed Concrete Steel Company. Mr. Cessna is an Iowa College man. We have been in business since the first of the year, and are doing first-rate."—F. W. Farrell has returned to the Emerson Laboratory, Springfield, Mass.—A letter to Rupf brought out the following: "Now for news. The latest I have to offer is that of the wedding of Harry Rowe to Miss Madeleine Alden Kingman at Yonkers, on the 8th of April. The wedding was a brilliant affair. George Magee, also of Course IV., was best man. As you perhaps know, they are in business together in Boston. I am in communication off and on with Rowland Rice. He is superintending a job up in Pomfret, Conn., for Ernest Flagg, the well-known architect of the Singer Building in New York. According to latest reports, the country air is so agreeing with him that he is beginning to strongly resemble our possible next President. I came here (Port Chester, N.Y.) with the Russell, Burdsall & Ward Bolt and Nut Company about a month after graduation. I am endeavoring to live up to the title of constructing engineer for the firm. We have a good-sized plant, keeping about 1,200 men busy, so you can see that I have very little idle time on my hands, and hustle from seven to six. Port Chester is a town of about 12,000, right on good old Long Island Sound, and in summer we just about live on the water. Then we are only twenty-five miles from New York, so we go in town often, shopping and dissipating."—Frank Davis came up nobly with: "I was over in Louisiana when one of your circular letters reached me, but am not now, much to my satisfaction. Christmas found me in Chicago, and New Year's on a train bound for Texas. I had letters from several railroad men in the North to railroad men down here, and, although I had intended to take a trip around and see the country, I changed my mind at the right time, and went to work for the Atlantic Lines Southern Pacific Company. I woke up on the Louisiana end the next morning in Lafayette, where I stayed until the middle of March as general foreman on the construction of the Baton Rouge-Lafayette line. I took in the Mardi Gras at New Orleans, and know

enough now to stay away from such things hereafter. I had dinner in Fort Worth with George Holbrook, '00, who is superintendent of Armour's lard refinery, and in Dallas I found L. A. Russell (VI., '04), who is treasurer of the Russell Realty Company. I took lunch with W. P. Bentley (VI., '04) in Dallas about the tenth of January last. Bentley is a superintendent of construction on the Dallas Street Railway, for Stone & Webster. I understand that there are Tech men here in Houston, but have not seen them. I took a fall out of Galveston the other day. Galveston is the first place in Texas of any size that did not seem attractive to me. You see that the grade-raising there is still going on, and a good share of the town is a sand beach. Everything there is interesting, though, dredges, sea-wall, etc. Till now there has been but one way to get into Galveston, and that over the Santa Fé's bridge. Five different railroads use this bridge, which the Santa Fé built just after the storm. I understand that Stone & Webster are going to build an interurban from here to Galveston just as soon as the causeway is built, and that is coming soon now. I have not found railroading here just exactly the same as it is north around Chicago, but I was surprised, after hearing such bad reports of Texas railroads, to find that there are some really good roads in Texas, in spite of all the railroad legislation and Railroad Commission. The Santa Fé has a rather fair track most of the way from Kansas City, the best part of it in Texas. The Southern Pacific lines are the best without doubt. They have pretty fair track, but I have yet to see the class of track that there is between old "Chi" and Milwaukee. I have been very well pleased with the men that I have met here, and that goes a long way. Altogether, I enjoy Texas well enough to stay awhile at least, and, when I do leave here, I am going to California and Oregon."—New addresses are C. R. Montsarrat, Mount Air, Powell, Ohio.—H. H. Gould, 24 Underhill Street, Winthrop, Mass.—Charles H. Stebbins, 76 Meridian Street, Melrose, Mass.—Ernest L. Clifford, 1203 Michigan Avenue, Evanston, Ill.—Jules E. White, 155 Remsen Street, Brooklyn, N.Y.

1906.

GEORGE F. HOBSON, *Acting Sec.*, 164 Holyrood Avenue, Lowell, Mass.

I. *On the Part of the Secretary.*

As per above heading, it will be seen that Mr. Angelo T. Heywood has given up his position with the Institute. He is going into mining operations out in the northern part of Idaho. The class will feel his loss very keenly, for he has done a great deal of laborious, hard work for the class, and the results that he has accomplished are shown by the manner in which the fellows are keeping up their class associations.

In accordance with the constitution a committee on general arrangements for the annual class dinner and commencement celebration was appointed by the Central Branch in May, as follows: George F. Hobson (I.), chairman; C. Lyman Anson (XIII.), Frank A. Benham (I.), Ralph R. Patch (I.), Charles H. Shapleigh (I.), and Herbert S. Whiting (VI.). This committee has been busy perfecting our June program reported below.

In accordance with the constitution the Executive Council appointed the following nominating committee to name candidates for the annual election of officers: George F. Hobson, Frank A. Benham, and Ralph Scudder Clark. The names reported by the committee were the only nominations received by the secretary, and were sent to the class in ballot form, as follows:—

For one member of Permanent Fund:—

C. L. Anson (XIII.), of Boston.

Floyd M. Fuller (II.-VI.), of Boston.

Director of Executive Council:—

Charles H. Shapleigh (I.), of Boston.

Herbert S. Whiting (VI.), of Roxbury.

The Executive Council has received the resignation of Angelo T. Heywood as class secretary, to take effect June 9, 1908, and, in accordance with the constitution, the Council has appointed

George F. Hobson (I.) acting secretary, to complete the term of office, which expires June 1, 1909.

SECOND ANNUAL DINNER, MEETING, AND COMMENCEMENT CELEBRATION OF THE CLASS OF 1906

On June 3 the annual dinner of the class was held at the Technology Club. Ralph Patch acted as toastmaster, and about thirty loyal men were present. A very fine dinner was served by the excellent steward of the club, and ample justice was done it. Mr. Isaac W. Litchfield, '85, was the speaker of the evening, and gave a very forceful talk on Institute matters in general and our relations to them in particular. Afterwards each man gave a résumé of his work since leaving the Institute. One man (I shall not divulge his name) claimed that he had been in "bath" six weeks, but, noticing a look of scepticism on our faces, he hastened to add that he worked for the Bath Iron Works.

It was voted that the Executive Council be instructed to determine who is the class baby (*i.e.*, the first baby born to a classmate married after the class graduated), and to honor this baby with a suitable gift from the class.

The secretary announced the appointment of the committee on ballots for the June election of class officers, as follows: James H. Polhemus, chairman; Stewart C. Coey, Carleton M. Emerson. Maxwell A. Coe was appointed the class marshal for Tech Night at the "Pops."

The fellows then adjourned to the music-room, and had an informal "get-together" for the rest of the evening.

June 9, 1908, brought with it the glorious Tech "Pops." Between 5.30 and 7.30 P.M. the clans gathered at the Hotel Brunswick. A light spread was served to all in the East Room, and '06 with '05 and '04 had three punch-bowls in service in one of the side rooms. Led by Max Coe, our marshal, at 7.30 the class marched in column of fours (and fives) up to Symphony Hall. In spots, however, it looked as if the fellows had forgotten their cadet training somewhat. At 8 o'clock everybody was there, and the air

became filled with Tech cheers, indiscriminate noise, and confetti. However, according to the prearranged programme, whenever the orchestra played, the classes became quiet and enjoyed the music. The singing was very much better this year, and the gallery could much better appreciate the beauty of our Tech songs. Thus the evening passed; and, when it was over, everybody felt that the new arrangement was a big improvement over the "rough house" of other days.

At least fifty-seven of our classmates were present at the "Pops," as follows: Barber, Sheldon, Jansson, P. K. Griffin, Ginsburg, Wood, Wolfe, Santry, Terry, Fallon, Polhemus, Mathesius, Wight, Hobson, Coe, Breitzke, Ralph Jackson, Messenger, Keleher, Whiting, Kidder, Clarke, Emerson, Kasson, Chadbourne, Johnson, C. A. Merriam, McGinnis, Kendall, Hill, Anson, Dissel, A. B. Sherman, Jr., Clifford, Fisher, Bent, Walsh, Patch, Heywood, Lawton, Cranston, Gaylord, Dixon, Rowe, Norton, Evans, Coey, Shapleigh, Sargent, Fuller, Harry Brown, Mowry (VI.), Reed (III.), Dan Adams, Kidder (VI.), and others, and in the balcony Miss Cederholm, Miss Ruggles, and a large number of '06 guests.

At the spread James H. Polhemus reported the results of the second annual election of class officers, as follows:—

Trustee for Permanent Fund: C. Lyman Anson, of Boston (re-elected). Term expires June 1, 1911.

Director of Executive Council: Charles H. Shapleigh, of Boston. Term expires June 1, 1911.

The secretary announced as follows regarding the appointment of (1) representatives of the geographical branches of the class and (2) Boston representative of each course:—

(1) In May the following letter was sent out to over one hundred fellows in the vicinity of New York City, Philadelphia, Pittsburg, Washington, D.C., Chicago, and California:—

Dear Sir,—I beg to call your attention to the enclosed '06 Class Constitution, which provides that the groups of fellows in principal centres shall be officially represented in the class organizations. The establishment

of representative correspondence for the unorganized groups, small or large, shall be arranged for by the class secretary.

Since no formal '06 branch has, to the knowledge of the class officers, been organized for and vicinity, I am writing to ask if you will assist me by suggesting the name of some classmate in that locality who would be a good correspondent to keep the fellows together there and help make sure that things are kept moving for Naughty-six.

Duplicate card catalogue files of addresses of all '06 men are being prepared from our class stencils, and will be sent to each correspondent. All corrections or changes of address are to be forwarded to the class secretary, or the Alumni Office, 37 Rogers Building, M. I. T., where they will be entered in the files. Duplicates of these changes will be sent weekly to each of our correspondents, who will thus always be furnished with a complete up-to-date catalogue of all his classmates. It is expected that this will be of much value to the correspondent.

I am writing to several of the fellows of the different courses in the various localities in order to get an approximately representative choice.

Will you be good enough to reply at your earliest convenience, in order that the appointment of the correspondent may be announced at the class dinner?

Thanking you in advance, I am,

Yours very truly,

ANGELO T. HEYWOOD, *Secretary.*

A large number of helpful and favorable replies came in very promptly from all over the country, and, after these were carefully considered, the names most commonly suggested were appointed, according to the constitution, to serve as "Corresponding Representatives of Class Branches," as follows:—

New York Branch of 1906. Charles A. Howard (II.), New York Edison Company, 55 Duane Street, New York, N.Y.

Philadelphia Branch of 1906. Percy E. Tillson (VI.), 3411 Walnut Street, Philadelphia, Pa.

Pittsburg Branch of 1906. Rutherford Bingham (VI.), Crucible Steel Company, Frick Building, Pittsburg, Pa.

Washington Branch of 1906. Herbert A. Terrell (II.), Supervising Architect's Office, United States Treasury Department, Washington, D.C.

Chicago Branch of 1906. Edwin D. A. Frank (II.), Allis Chalmers Company, Milwaukee, Wis.

California Branch of 1906. Louis A. Parker (IV.), 372-373 Pacific Electric Building, Los Angeles, Cal.

Panama Branch of 1906. Robert J. Lyons (XIII.), Culebra, Canal Zone.

And, in addition, the following, previously appointed:—

Central Branch of 1906. * Herbert S. Whiting (VI.), of Conant, Whiting & Co., Inc., 112 Water Street, Boston, Mass. ('Phone, Fort Hill 1683).

Correspondents-at-large:—

Representative of the (thirty) women in the class. Miss Eleanor Manning (IV.), care Lois L. Howe, Architect, 717 Tremont Street, Boston, Mass.

Past secretary of the class. Thomas Leslie Hinckley (XI.), 745 Osceola Avenue, St. Paul, Minn.

(2) In a similar manner, with the advice and approval of the Executive Council, the following men, living in Boston and vicinity, were appointed as "Boston Representatives of Courses":—

Course I. Frank A. Benham, New England Telephone & Telegraph Construction, 164 High Street, Boston, Mass.

Course II. Anthony P. Mathesius, Lombard Governor Company, Ashland, Mass.

Course III. Raymond J. Barber, Globe Optical Company, 403 Washington Street, Boston.

Course IV. Ralph T. C. Jackson, 169 Locust Street, Fall River, Mass.

Courses V., VII., and X. James B. L. Orme, of Orme & Tucker, 112 Water Street, Boston.

Course VI. Herbert S. Whiting, of Conant, Whiting & Co., Inc., 112 Water Street, Boston, Mass.

Course VIII. Edward B. Rowe, 85 Prince Street, West Newton, Mass.

* Chairman of Committee appointed at class dinner Feb. 12, 1908, to organize the Central Branch.

Course XI. Ralph R. Patch, 28 Lincoln Street, Stoneham, Mass.

Course XIII. C. Lyman Anson, Technology Chambers, Boston, Mass.

Acceptances have already been received from nearly all of these.

From the replies referred to above, it seemed to be a common occurrence that some of the fellows did not know many of their classmates who were living in their immediate vicinity, but we were glad to see that almost all the fellows were desirous of learning the whereabouts of any '06 neighbors in order to keep in touch with them.

If any classmate not located in any of the class branches noted above wishes to find out if there are any '06 men in his own vicinity, he has only to drop a line to the class secretary, who will be glad to look up the locality in the large and complete geographical register at the Alumni Association office.

The secretary spoke of the next All-Technology, General, Five-year Reunion which comes in June, 1909. This is a time when a great many alumni and their friends journey from long distances back to Beantown to join in the celebrations in memory of the old days at the Alma Mater. The best part of a week is spent in Boston and vicinity in field days, dinners, meetings, spreads, harbor excursions on steamers chartered for the occasion, and outings of all kinds. It is the grandest time for Tech men. Judging from the first reunion in 1904, the reunion in 1909 promises to exceed anything attempted heretofore. All the classes and organizations are preparing for it, and many of the distant men have already spoken of their plans for coming back next June to take this special course at Tech.

The following extract from *The Tech* indicates that Percy Tillson is helping to keep things moving in Philadelphia:—

Percy E. Tillson, secretary of the Technology Club of Philadelphia, has extended a cordial invitation to all undergraduates who may be in the vicinity of the Quaker city to a Field Day and outing of the club. The celebration will be held on the twentieth of June at the Woodbury Country Club, Woodbury, N.J.

II. Personal Announcements and Notes.

The secretary takes pleasure in recording the following announcements:—

“Mr. Benjamin Myer Brink announces the marriage of his daughter Mary to Mr. Norman Paul Gerhard, on Wednesday, the third of June, nineteen hundred and eight, Saugerties, New York. At home after August first, Emerson Street, Kingston, N.Y.”

“Mr. and Mrs. Edward L. Stewart have the honor of announcing the marriage of their daughter Marion Edwards to Mr. Fay Wilmott Libbey, on Thursday, the nineteenth day of March, nineteen hundred and eight, at Trinity Church, Phoenix, Arizona.”

Bruce R. Honeyman is engaged to Miss Marion Blakeley, of Tacoma, Wash. Honeyman has recently gone into business with Morris H. Whitehouse in Portland, Ore., and it is reported that they are doing a flourishing business, even in these dull times. It will be remembered that “Molly” Whitehouse won the Rotch Travelling Scholarship in Architecture. Enterprising spirit!

“On April 1, 1908, Miss Edith A. Swett, of Newton Highlands, Mass., was married to Mr. Wallace R. Hall, at the home of the bride’s parents.” Hall had recently returned from Porto Rico, where he worked with Yrizarry and Cartegena.

It is reported that Charles W. Mowry (II.) was married on April 16, 1908, but as yet we are unable to give the young lady’s name. This spring it was reported, also, that Henry D. Loring (I.) had been married.

According to the past record of the class, the coming of June, a propitious season of the year (and leap year, too), should reveal a larger number of capitulations in the ranks of Naughty-six. However, the extreme shyness and quietude among some of the classmates at present persuades the secretary to believe that Cupid has really won many victories.

We have four men about to try for the degree of Ph.D. this fall: Warren Kendall is going to Columbia University, as noted below; John F. Norton, to Chicago University; George F. White chose Johns Hopkins; and H. P. Hollnagel is going to Germany. Clipings from *The Tech* read:—

SCHOLARSHIP TO TECH MAN

The University Council at Columbia University, New York, has just awarded a scholarship of the value of \$150 to Mr. Burton W. Kendall, 1906, a resident of Gardner, Mass. The selection of the Columbia University Scholarships, of which thirty-two are awarded each year, is made from among a large number of graduates of the best colleges and universities in the country.

COURSE V. MAN ATTRACTS ATTENTION

J. Garfield Riley, 1906, Course V., who has recently been appointed to a position in the laboratory of the United States at Washington, D.C., is attracting considerable attention by his excellent work. He will probably be assigned later to a new station to be installed in Boston, at which investigations will be carried into the dairies in New England."

Harry Nabstedt, with Amburseen Hydraulic Company, has been put in full charge of the construction of a dam in Woodstock, Vt.—Charles Abbott has gone into the structural iron business with his father.—T. A. Nolan has also gone into general architectural contracting for himself.—Louis Maxfield is at present on the United States battleship "Illinois," and Charles E. Hovey is on the "Ohio." Address, U.S. Fleet, care P.M., New York, N.Y.—Yrizarry is on work installing a transmission line from Salto de Corherio to San Juan.—A. S. Thomas, Trowbridge, Haley, Burleigh, and Patterson have been seen in Boston on various occasions this spring.—McKernan is assistant to P. M. Blake, civil engineer, Newtonville, in hydraulic works.—I. D. Varshnei, of India, whose change of address is noted below, has been chosen to take charge of a model glass factory to be started for teaching the glass industry to East Indians.—Van Amringe, of 29 Crawford Street, Roxbury, Mass., is engaged as granite salesman.—Herbert W. Harvey was last reported with the O'Rourke Construction Company, New York City.—"At" Rippey (III.) is in Paris at present. We suppose he is either selling or buying gems.—"Joe" Santry is a member of the firm of Schumaker & Santry, engineers and manufacturers' agents, 141 Milk Street, Boston ('phone connections).—Laurence G. Blodgett is working

for his father, Mr. A. M. Blodgett, on various jobs in Mississippi and Louisiana. St. Louis address will reach him.—Max Coe left Boston the middle of June for Canada, to take up mill engineering work in a plant located near the city of Quebec.

III. *Changes of Address.*

The secretary has been fortunate in keeping track of the movements of the fellows: The following changes have been received since the last issue of the REVIEW:—

Professor Arthur K. Adams, New Mexico Sch. Mines, Socorro, N.M.—Odgen R. Adams, 5th and Pine Streets, Seattle, Wash.—John Anderson, O. Department, Fore River Shipbuilding Company, Quincy, Mass.—Edwin B. Bartlett, care Allis-Chalmers Company, Salt Lake City, Utah.—Fred R. Batcheller, 1101 Centre Street, Wilkinsburg, Pa.—William P. Bearce, 220 Devonshire Street, Boston, Mass.—David Bloom, S. S. White Dental Manufacturing Company, Prince Bay, N.Y.—Robert H. Booth, 4424 Eighth Avenue, Rock Island, Ill.—George W. Burpee, care W. C. K. & Co., 10 Bridge Street, New York, N.Y.—Herbert Callman, summer address, P.O. Box 302, Lawrence, L.I.—Earl G. Christy, 2820 Collingwood Avenue, Toledo, Ohio.—Prescott J. Clapp, Board of Water Supply, Brown Station, N.Y.—W. B. Clifford, 94 Summer Street, Fitchburg, Mass.—R. E. Cushman, Kingston, Mass.—E. Harley Daniels, Box F, Natick, Mass.—William J. Deavitt, care Minas Tecolotes, Y Anexas, Santa Barbara, Chih., Mexico.—Robert H. Doepke, care The Alms & Doepke Company, Cincinnati, Ohio.—Sylvester B. Eagan, 993 Delaware Avenue, Buffalo, N.Y.—Nugent Fallon, 489 Walnut Avenue, Jamaica Plain, Mass.—William C. Furer, United States Naval Station, Pearl Harbor, Honolulu, T.H.—William W. Gaylord, Torrington, Conn.—Norman P. Gerhard, 53 Emerson Street, Kingston, N.Y.—Michael J. Gibbons, Jr., 247 McDaniel Street, Dayton, Ohio.—E. C. Groesbeck, 27 W. 73d Street, New York, N.Y.—W. R. Hall, 139 Winchester Street, Newton Highlands, Mass.—Richard F. Hammatt, care United States Forest Service, Washington, D.C.—Alfred R. Heckman, 21 Erie Street,

Elizabeth, N.J.—T. L. Hinckley, 745 Osceola Avenue, St. Paul, Minn.—William W. Hosmer, Jr., P.O. Box 740, Hartford, Conn.—Walter A. Hotchkiss, 7 Blaine Street, Hornell, N.Y.—Charles E. Hovey, United States steamship "Ohio," care Postmaster, New York, N.Y.—Henry S. Hubbell, Ashburnham, Mass.—Isa W. Kahn, 349 Massachusetts Avenue, Peoria, Ill.—R. D. Kelley, care Engineering Department, Union Depot, Terre Haute, Ind.—Warren Kendall, Columbia University, New York, N.Y.—J. W. Kidder (VI.), 22 Brook Street, Somerville, Mass.—Harold Kingsbury, Box 38, Washington, D.C.—Abraham L. Lampie, 41 Lindsey Street, Dorchester, Mass.—Lieutenant Charles T. Leeds, United States Engineer Office, 723 Central Building, Los Angeles, Cal.—F. W. Libbey, 2144 West Madison Street, Phoenix, Ariz.—William H. Lincoln, Reclamation Service, Glendive, Mont.—J. N. McKernan, 28 Bickerstaff Street, Boston, Mass.—W. E. H. Mathison, 80 Ingersol Grove, Springfield, Mass.—Henry S. Mears, 721 Flanders Street, Portland, Ore.—Harold Morse, Newton Lower Falls, Mass.—T. A. Nolan, 16 Paul Gore Street, Jamaica Plain, Boston, Mass.—Chadwell S. Peirce, 2314 Harrison Street, Evanston, Ill.—Mark H. Place, Milton, Wis.—J. H. Polhemus, Caney, Kan.—Edw. B. Pollister, Robinson Water Light and Heat Company, Robinson, Ill.—Charles D. Richardson, Underwriters' Lab., 336 Fourth Avenue, Pittsburg, Pa.—Wear L. Rowell, 169 Humphrey Street, Swampscott, Mass.—Guy C. Simpson, 100 Prince Street, West Newton, Mass.—Ralph N. Soule, 616 Carlton Avenue, Brooklyn, N.Y.—Philip B. Stanley, Stanley Place, New Britain, Conn.—R. C. Thayer, 10 Hamilton Avenue, Dorchester, Mass.—Ishwar das Varshnei, Samarth Vidyalaya, Talegaon, on G. I. P. Railway, District Poona, India.—Clifford R. Wilfley, Hostotipaquillo, Jalisco, Mexico.—H. L. Williams, Box 106, Deadwood, So. Dak.—Leland S. Woodruff, 5029 Linden Street, E. Norwood, Ohio.

IV. *New Addresses.*

The secretary wishes to acknowledge much help rendered him by the Alumni Office in locating, for the first time since they left school,

the following classmates: Arthur G. Bruce, Hda. Florida, Yauco, Porto Rico.—Walter E. Calley, 112 Upland Road, Cambridge, Mass.—Edward Fifield, 430 Ellison Street, Paterson, N.J.—Edward W. Forbes, care Proctor & Gamble Company, Ivorydale, Ohio.—Harold S. Graham, P.O. Box 313, San Juan, Porto Rico.—Leroy P. Henderson, 65 Dodge Street, Beverly, Mass.—Richard L. Hogner, 328 Massachusetts Avenue, Boston, Mass.—Roy G. Kennedy, 65 Ashland Avenue, Buffalo, N.Y.—Milton Lichtenstein, Locust Avenue, San Rafael, Cal.—Herbert D. McKibben, Esterly Construction Company, Adeline and Oregon Streets, Berkeley, Cal.—John T. Maher, 339 South Station, Boston, Mass. (graduated with 1907).—John W. Merrow, care R. M. Blakie, United States Banking Company, Mexico City, Mexico.—Miss Sarah E. Potter, Girls' High School, West Newton Street, Boston, Mass.

V. *Letters.*

"Bill" Neilson and Healy ('03) are in business together: "Neilson & Healy, Contracting Engineers, United States Deputy Mining Surveyors, Wonder, Nev." "Bill" writes in part: "I have been so busy for the past year that I haven't been able to get East or even out of the State. (Haven't seen a railroad for a year and only once in two years.)" He says Howard Blake, the old captain of our star basket-ball team, is keeping things moving on the Pacific Coast, as secretary-treasurer of the New California Association of the M. I. T.

In reply to an inquiry from the secretary, Charles F. W. Wetterer wrote just after the flood in Dallas that "the most damage was done to the steam railroads, our interurban line, our electric light plant," but he also adds that they are pretty well straightened out now.

R. S. Clark (XIII.), who has left the coast and gone to Nevada to look after the business of the Sullivan Machinery Company throughout that State, met Jack Kinnear, who, with his wife, is living near Goldfield. Clark does not seem to be wholly in sympathy with the country out there:—

"This section of the country is surely a desert, with little to look at but sage brush, and sometimes that is lacking. But, for all its barrenness, I am told that it 'grows on one,' whatever that means. Hope it doesn't grow on me."

The death of Forrest Lord was reported in April. He was at Tech not much more than a year, and had been working with his father in the twine business in Boston. Although a stocky fellow, he was sick with heart trouble for a long time. He died at his home in Melrose, March 10, 1908.

1907.

ALEXANDER MACOMBER, *Sec.*, Fern, Shasta County, Cal.
BRYANT NICHOLS, *Res. Sec.*, 138 Fremont Avenue, Everett, Mass.

I.

With this last month our class finishes its first year as alumni. It is the intention of your secretaries to issue soon a report containing an outline of the year's work, statistics of the class, financial report, etc. While much of this matter has appeared in the REVIEW, it is thought that it will be of value in maintaining class interest, and will form a valuable reference. The event of the year—the reunion—was a great success. A full account is given here, and, as those who could not be present read it, they will plan to be on hand next year when the big reunion occurs. The Reunion Committee is to be congratulated on its work.

REPORT OF THE REUNION

On May 5 the following letter was mailed to the 650 fellows whose names appear on the class-roll. The committee wish to publicly thank J. E. Garratt, J. M. Barker, G. S. Gould, and C. R. Denmark, who assisted in this work.

BOSTON, April 28, 1908.

To the Members of the Class of 1907:

The committee appointed by the Secretary to arrange for the First Annual Reunion of the Class begs leave to make the following announcements:—

The REUNION will be held in Boston, Tuesday, June 9, 1908. The Alumni Association and the Association of Class Secretaries will maintain open house at the Technology Club, 83 Newbury Street, during the entire day. The HEADQUARTERS for the Class of '07 will be at HOTEL NOTTINGHAM, Copley Square, where a room will be at the disposal of the members of the Class after 9:30 A.M. Members are urged to use this room as a meeting place and as a place for checking baggage. Some of the committee will be on hand to greet the fellows, and punch will be served throughout the day. All are requested to register there some time during the day.

DINNER will be served at 5:45 P.M. SHARP, at Hotel Nottingham. Price per plate is two dollars (\$2.00), which covers all expenses of the reunion except admission to the Pops. Results of the Class election will be announced at this dinner.

After the dinner the Class will march in a body to Symphony Hall to the Pops. Full particulars regarding the Pops will be sent you by the Association of Class Secretaries.

Enclosed you will find a copy of the proposed new Class Constitution. The graduation of the Class making it necessary to draw up a new Constitution, the Reunion Committee was authorized by the Secretary to do so, and present the same to the Class. On the enclosed ballot you will find opportunity to cast your vote for or against this Constitution. Inasmuch as the new Constitution has not yet been ratified, it was necessary that some committee should act as the first nominating committee. The Reunion Committee was authorized by the secretary to act in this capacity, and we enclose a ballot with the nominations called for by the new Constitution.

You will also find a reply sheet which every member is urged to fill out and return with his ballot. Among the items on this sheet you will find one pertaining to SALARY. As is the usual custom, it is proposed to announce at the annual dinner the average salary of the Class. For this purpose we are enclosing a slip upon which your salary is to be written. The slip is to be returned sealed in the envelope addressed to Dean Burton. The Dean has consented to receive these sealed envelopes, and to shuffle them so that it will be impossible to ascertain to which individual the salary indicated upon any slip may belong.

All members are earnestly requested to return ballot and reply sheet, whether or not they expect to be present. All replies must be in by Monday, May 25, 1908. We had sixty-seven men at the informal class dinner, Jan. 11, 1908. We should have many more at this, OUR FIRST REUNION DINNER. It is absolutely necessary we hear from every one promptly. Don't delay answering. Plan to be with us June 9.

BRYANT NICHOLS, *Chairman,*
WILLIAM W. BIGELOW, *Secretary,*
CHARLES E. ALLEN,
CLARENCE D. HOWE,
HAROLD S. WONSON,
Reunion Committee.

The constitution proposed follows:—

CONSTITUTION

ARTICLE I.

NAME

This organization shall be called the Class of 1907 of the Massachusetts Institute of Technology.

ARTICLE II.

PURPOSE

The purpose of the organization shall be to further the interests of the Institute and to maintain the unity of the class.

ARTICLE III.

MEMBERSHIP

All graduates of the class, and any who, during their Institute course, have been affiliated with the class, shall be eligible for membership.

ARTICLE IV.

OFFICERS

The officers shall consist of a President, two Vice-Presidents, a Secretary-Treasurer, a Resident Secretary, two Auditors, and an Executive Committee. One of the Vice-Presidents and the Resident Secretary shall be residents of Boston or vicinity. The Executive Committee shall consist of the above officers and one member at large.

ARTICLE V.

DUTIES OF OFFICERS

SECTION 1.—PRESIDENT. It shall be the duty of the President to preside at all meetings of the class and of the Executive Committee, and to perform all the duties usually pertaining to this office.

SECTION 2.—VICE-PRESIDENTS. It shall be the duty of the Vice-Presidents to assist the President in the performance of his duties.

SECTION 3.—SECRETARY-TREASURER. It shall be the duty of the Secretary-Treasurer to keep accurate minutes of the class and of the Executive Committee; to keep a complete enrolment of the members of the class; and to issue notices of all meetings of the class and of the Executive Committee. He shall represent the class at the Association of Class Secretaries. He shall keep all books and accounts of the class, and shall be custodian of the class funds. He shall make no expenditures unless authorized by the Executive Committee.

SECTION 4.—RESIDENT SECRETARY. It shall be the duty of the Resident Secretary to assist the Secretary and assume his duties in his absence.

SECTION 5.—AUDITORS. It shall be the duty of the Auditors to examine annually the books and accounts of the Secretary-Treasurer, and to report upon the same to the Executive Committee.

SECTION 6.—EXECUTIVE COMMITTEE. It shall be the duty of the Executive Committee to direct the affairs of the class.

ARTICLE VI.**ELECTIONS**

The election of officers and committees shall take place on the third Monday in May of each year. Elections shall be conducted by a Nominating Committee of three members which shall have been elected at the previous election. This committee shall submit to the class at least one nominee for each office, and at least three nominees for the succeeding Nominating Committee. This committee shall receive additional nominations signed by at least five members of the class, and shall place the same upon the official ballot. This committee shall prepare the official ballot and shall send a copy of the same to each member of the class at least four weeks before the election. The result of the election shall be announced at the annual dinner, and shall be published in THE TECHNOLOGY REVIEW. Officers shall assume their duties, and the fiscal year shall begin on the first day of July.

ARTICLE VII.**DUES**

The annual dues shall be one dollar, and shall be payable for the succeeding year on or before the first day of July.

ARTICLE VIII.**RATIFICATION**

This constitution shall take effect when ratified by two-thirds of those voting, and shall supersede all previous constitutions of this class.

ARTICLE IX.**AMENDMENTS**

Amendments may be submitted to the class by the Executive Committee, and shall take effect when ratified by two-thirds of those voting.

The class dinner was held, as announced, in Hotel Nottingham on Commencement Day, June 9, at 5.45 P.M. Two rooms in the same hotel were at the disposal of the class during the day. About 4.30 the fellows began to gather, and it seemed like former times as one by one they arrived and were greeted by those who had come earlier. They were a merry crowd as they smoked together, told of interesting experiences, and partook of the punch provided by the hotel. By 5.45 the rooms were filled to overflowing, and soon after dinner was served. In the class registration book purchased by the committee, sixty-three names are written, as follows:—

W. L. Woodward, H. S. Wonson, John Tetlow, Bryant Nichols, F. S. MacGregor, P. R. Nichols, L. L. Allen, T. J. Holmes, W. W. Bigelow, E. V. Potter, H. B. Hastings, G. W. Otis, C. D. Howe,

A. O. Christensen, E. H. Squire, C. E. Allen, C. A. Bowen, Laurence Wetmore, A. F. Stevenson, R. C. Albro, P. B. Walker, R. K. Taylor, L. C. Whittemore, F. B. Schmidt, P. J. Colvin, Kenneth Moller, C. N. Draper, A. B. Arnold, R. W. Lindsay, W. D. Robinson, W. S. Wilson, H. P. Farrington, F. W. Morrill, C. F. Baker, P. L. Cumings, E. S. Wires, Captain S. A. Kephart, U.S.A., Allen Pope, F. G. Dempwolf, W. W. Pagon, H. B. Hosmer, J. B. Harlow, M. E. MacGregor, M. W. Sage, J. E. Tresnon, J. E. Garratt, R. A. Martinez, E. H. Sargent, D. G. Robbins, F. T. Moses, R. D. Gale, L. A. Dickinson, H. M. Lewis, Jr., Gilbert Small, A. N. Rebori, K. G. Chipman, C. R. Bragdon, W. P. Monahan, E. G. Lee, S. E. Rockwell, Lawrence Allen, J. J. Thomas, G. R. Norton.

W. L. Woodward was toastmaster, and after words of greeting called upon Lawrie Allen. We were all the more delighted to have Lawrie with us because he had written that he could not come. Tuesday morning, however, Charlie Allen received a postal from him which read: "Wow! Meet me at Back Bay at 5.40!" Lawrie spoke on the joys of married life, and called on Hud Hastings to back him up in urging all the fellows to take the step.

Bryant Nichols gave some statistics, most of which were gathered from the replies just received. From the class-roll secured from the alumni office the following figures were made up:—

Total number connected with 1907	650
Number connected with 1907 only	506
Number connected also with other classes	144
Number graduated with 1907	207
Entered first year	117 56.5%
Entered after first year	48 23.2%
Entered from other classes	42 20.3%

The average salary received by 1907 men, made up from 128 replies, is \$970.04. The highest is \$2,400, and the lowest is \$250. 8.6 per cent. of the class get \$1,500 or more, and 44.5 per cent. receive \$1,000 or more. The total salary represented by the 128 men who replied is \$124,165.

Other interesting items obtained from the reply sheets will appear under the heading "Personal Notes."

Woodward announced the result of the class election, which follows: president, D. G. Robbins; vice-presidents, F. S. MacGregor and W. L. Woodward; secretary-treasurer, Alexander Macomber; resident secretary, Bryant Nichols; auditors, R. W. Lindsay and R. G. Woodbridge; member-at-large of the executive committee, L. W. Brock; nominating committee, R. C. Albro, J. M. Barker, and G. S. Gould.

Don Robbins, as the new president, said a few words, promising to do his utmost to advance the welfare of the class.

It was getting so late by this time that the fellows had to lose the last part of the dinner in order to reach Symphony Hall for the Pops before eight o'clock. The class formed in column of fours in front of the hotel, and marched to the hall. Several of the fellows who could not get round to the dinner were present at the Pops. Among these were noticed E. H. Packard, R. E. Keyes, John Evans, and G. D. Luther.

STATEMENT ON FINANCES OF THE REUNION

Receipts

From Alexander Macomber, Treasurer	\$25.00
From First Alumni Dinner Committee80
" Sale of dinner tickets	126.00
	<u>\$151.80</u>

Expenditures

To 63 dinners at \$1.50	\$94.50
" 2 gallons punch	6.00
" printing circulars, etc.	21.00
" printing menus	4.25
" class registration book	5.75
" cigars	4.50
" postage	8.39
" miscellaneous expense	3.00
	<u>\$147.39</u>
Cash on hand	4.41
	<u>\$151.80</u>

II.

PERSONAL NOTES

At the place of honor under this heading should come the list of the members of the class who are married or engaged, this information being taken, for the most part, from the reply sheets. The following men are married: Lawrie Allen, L. H. Cutten, C. S. Dean did the act June 30, Kirk Dyer, Hud Hastings, C. R. Lamont, F. E. Langenheim, "Stud" Leavell, Moller, Harry Moody, F. T. Moses, P. R. Nichols, Al Pope (on June 10, and yet he was at the dinner on the 9th! a loyal man!), Winsor Soule, G. R. Taylor, S. P. Thacher, C. A. Vose, R. B. Sanders, Oscar Starkweather, and the following announcement will be of special interest to all:—

Miss MARGUERITE A. FABENS
announces the marriage of her sister
MARY CHANDLER
to
Mr. EDWIN DEXTER BOLES
on Saturday, March the twenty-first
nineteen hundred and eight
St. Philip's Church
London

The list of those engaged is much longer. It is: L. L. Allen, C. A. Bowen, C. R. Bragdon, L. W. Brock, A. L. Burwell, E. L. Chaffee, H. R. Chase, J. A. Davis, S. G. Emilio, J. M. Gaylord, A. S. Black, R. H. Hall, J. B. Harlow, F. C. Jaccard, H. A. Kingsbury, A. T. Kolatshevsky, A. G. Lang, E. G. Lee, E. H. Packard, G. E. Prouty, J. L. Walsh, A. E. Wiggin, R. H. Willcomb, E. C. Wilson, E. S. Wires. Congratulations to all these men!

P. L. Adams, who has been an instructor in mathematics at the Oregon Agricultural College, expects to resume work at Tech this fall.—R. C. Ashenden (ex '07) may be reached at the Burbank House, Pittsfield, Mass.—Bob Albro received his degree on June 9.—Charlie Allen will work in Greenfield, Mass., this summer, and

expects to return to the Institute to teach another year.—Lawrie Allen says he is "happy, poor, working hard. Homesick for old Boston, but pretty contented in a little home of my own."—J. M. Baker, 7416 Bond Avenue, Chicago.—Rutherford Bingham is at 4259 5th Avenue, Pittsburg.—E. S. Chase, 14 Berkshire Street, Worcester, Mass.—J. S. Coupal is with the Mammoth Mining Company, Kennett, Cal.—Crosby, in Chicago, says he is not engaged, because "I cannot convince myself that Mormonism is right, and otherwise engagement were impossible."—W. D. Davol, 143 Amity Street, Brooklyn, N.Y.—C. N. Draper is now S.B.—Otis Fales is now in New Orleans with the Gregg Company, Ltd.—L. R. Fredendall, the adjutant of M. I. T. C. C. in '03, is now a lieutenant in the Second United States Infantry, stationed at Fort Assinniboine, Mont.—R. F. Gale, is at Rossmann, N.Y.—H. W. Gerhard, 39 Strong Place, Brooklyn, N.Y.—S. C. Godfrey (ex '07) is a cadet at West Point.—George Griffin is with the United States Department of Agriculture, Chevy Chase, Md.—B. C. Gupta writes from London, England: . . . "My own life has been rather uninteresting so far, but the future looks very bright and cheerful. I worked for four months with the British Thomson-Houston Company on switch-board design, and earned the magnificent salary of \$2.50 a week, nothing found. The British companies, one and all, expect work, and give no compensation. It is against their principles to pay for work done. I have just been appointed an assistant engineer in the large power transmission scheme at Kashmere on a very decent salary and free quarters. . . . If I can make a success out of life, and if any of you boys would like to cast in your fortunes with me in far-away India, do not hesitate to ask for information. I am the humble servant of the class of 1907. . . . I cannot express my longing in actual words to be with the dear old bunch again. My future home in Kashmere will always be a place of welcome to my friends and brothers of 1907." . . . Gupta's address after August, 1908, will be "Care of Major De-Labiniere (chief engineer), Seinagar, Kashmere, India."—H. R. Hall, Colonial Inn, Newburg, N.Y.—F. S. Hamilton (ex '07) is mine manager, Webb City, Mo.—Bert Johnson, 109 Luzerne Avenue, Pittsburg.—J. F. Johnston, Jr.,

Capitol Building, Sacramento, Cal.—W. F. Kimball, writes, "I never fully appreciated the multiplicity of 'tonsorial parlors' in and near Boston until I received a letter from Pastoriza, Provo, Utah, in which he says he had to go forty miles to get a hair cut last winter."—F. H. Kales is superintendent of light-house construction, Honolulu, H.I.—E. F. Kelly, 113 East 10th Street, Erie, Pa.—A. S. Kendall, 876 Beacon Street, Newton Centre, Mass.—H. A. Kingsbury, Box 38, Washington, D.C.—Lamont and Kolatshevsky both received their degrees June 9.—J. H. Link, 319 North 40th Street, Philadelphia.—H. D. Loring, 304 West 28th Street, New York.—"Stud" Leavell writes: "Am flirting with the Mexican government about a concession. Have adopted as my motto, 'God help the rich: we poor can starve this year.'"—H. J. C. MacDonald is at Searchlight, Nev., with the Quartette Mining Company.—J. A. McElroy, 101 Meigs Building, Bridgeport, Conn.—M. E. MacGregor is instructor in mathematics at Mercersburg Academy, Mercersburg, Pa. Mac still keeps up his athletics and coaches the track team there.—A. P. Mansfield, 591 La Salle Avenue, Chicago,—B. F. Mills, 126 Appleton Avenue, Pittsfield, Mass.—J. G. Moore, 407 West 2d Street, Elmira, N.Y.—M. H. Pease is with the El Paso Electric Company, 209 Upson Avenue, El Paso, Tex.—John Rehn writes: . . . "I am sorry my attendance with you must be only in spirit. You know that I'd like to be there, and help sing bass or mezzo soprano with the fellows. Remember me to them. I wish you all well." . . . —W. D. Robinson, 8 Harrison Street, Stapleton, Long Island, N.Y.—DeW. C. Ruff, care Boyd Burns Company, Vancouver, B.C.—R. H. Willcomb is with the B. & M. Smelter, Great Falls, Mont.

1908.

JOHN T. TOBIN, *Sec.*, 43 East Newton Street, Boston, Mass.

On Friday, April 10, 1908, the thirty-second regular meeting of the class was called to order by Vice-President Barnes at 1.10 P.M. There were fifty members present. A committee of four was

appointed to draw up resolutions expressing regret at the death of Arthur Clinton Richmond, ex '08. John S. Barnes, A. G. Place, E. I. Williams, and Maurice E. Allen acted for the class.

Whereas Almighty God has chosen to remove Arthur Clinton Richmond from our ranks; and

Whereas the members of the class of 1908 of the Massachusetts Institute of Technology feel a deep sorrow in the loss of one who, by his earnest work and his quiet, friendly manner, has won the esteem of all,—therefore be it

Resolved, That by the decease of our classmate the Institute has lost a valuable exponent of its ideas, and the class has lost a friend and helper; and be it further

Resolved, That we hereby extend our sincere sympathy to the bereaved family; and be it further

Resolved, That a copy of these resolutions be spread on the minutes of the class, and that they be published in *The Tech*.

The thirty-third regular meeting was held on Wednesday, April 15, 1908. After a stormy discussion it was decided that the notices from the Faculty regarding degrees should not be given out at the annual class dinner. This feature of former Senior class dinners was done away with because of a feeling that it would mar the enjoyment of the dinner for many men, and that it was not fair to the men who do not receive degrees.

H. A. Rapelye, president of the class, introduced the question and called for the opinion of the class. J. T. Tobin, after some discussion, moved that the degree notices be given out at the dinner, the class voting against the motion 50 to 35.

The setting of the date for the dinner was left to the class day committee. It was also decided to send a note of consolation to Professor Porter, whose wife had died suddenly.

The thirty-fourth regular meeting took place at the American House, June 4, at 8.30 P.M., on the night of the Senior banquet. President Rapelye presided. It was voted that the graduate officer of the class should consist of a graduate secretary. John T. Tobin was elected to the office. A vote of thanks was moved to the Tech-

nology Clubs of New York and Philadelphia for their kind invitations to membership.

At a special meeting, called just before the graduation exercises on Tuesday, June 9, Rudolph Weiler and Loyd Sutton were nominated for assistant class secretary. Weiler was elected.

In the popular ballot for the class day committee the three marshals chosen were, in order: Herbert Thurston Gerrish, Clifford Hall Boylston, Francis Harrington McGuigan, Jr. The other members of the committee were Horace Ethan Allen, Maurice Everett Allen, Henry Washington Blackburn, Langdon Coffin, Samuel Harris Daddow, Raymond Edward Drake, Leslie Burton Ellis, Winthrop Drew Ford, Charles Alphonsus Gibbons, Jr., George Thummel Glover, Lafayette Boyd Hedge, Bernard Shepard Leslie, Thomas Whitley Orr, Harold Smith Osborne, William Joseph Pierce, Joseph Pope, Joseph Gilman Reid, Leavitt Weare Thurlow, John Theodore Tobin, Kurt Vonnegut, Harry Webb, Edgar Irving Williams, Harry Andrew Rapelye, *ex officio*.

The committee wishes to express a vote of thanks to Professor and Mrs. Pearson for the very enjoyable evening which they had the pleasure of spending at their home on Wednesday, June 3. It certainly was a treat.

The following '08 men were successful in the *Technique* rush. Of the first five copies, numbers two, three, and four fell to George Glover, H. J. Ruggles, and P. R. Powell, respectively. R. W. Parlin, R. W. Ferris, L. W. Thurlow, H. E. Allen, and M. L. Bullard were among the lucky recipients of numbered copies.

1908 extends its best wishes to Carl Gram, '09, captain of next year's 'varsity track team. May he lead the team as successfully to victory as did Captain Tommy Orr, '08, our own pride!

The class also congratulates George Schobinger, '08, on the winning of the coveted "T," for which he strove so manfully.

All '08 men are very proud of the Senior Portfolio. The very efficient committee which had the work in hand consisted of Harry Webb, chairman, "Sam" Daddow, "Bill" Barton, "Hobe" Ferris, and "Ed" Williams.

The C. E. Society showed their appreciation of the splendid work

of this year's president, Raymond W. Parlin, by presenting him with a handsomely engraved gavel.

Wm. McAuliffe and Leo S. Stone will return to the Institute in the fall.—Howard B. Luther will also return to the Institute in the fall as an assistant in Course I.—V. E. Bird has a position with the New England Telephone Company. Address, Tech Chambers.—H. W. Dun is going to work with the New York Central Railroad, and will return to Tech in the fall.—W. F. Dolke and E. I. Williams will return as graduate students in architecture.—R. E. Schirmer will attend the Columbia School of Mines next year.—H. W. Blackburn has a position as draughtsman at the Pacific Mills, Lawrence, Mass.—Karl R. Kennison will be with the Factory Mutual Fire Insurance Company, 31 Milk Street, Boston.—Richard C. Collins has a position in the Dolphin Jute Mills, Paterson, N.J.—H. C. Faxon is going into civil engineering at Braintree, Mass.—Carl H. Bangs is to be an instructor in the mechanical engineering department of the University of Vermont.—Masanao Yendo, address care Japanese Ambassador, Berlin, Germany.—T. Tse will spend the summer with the Great Bras d'Or Mining Company, Baddeck, N.S. He will return to Tech in the fall for graduate study.—H. A. Rapelye will return to Tech in the fall as assistant to the President.—George Glover will be with the Lima Locomotive & Machine Company, Lima, Ohio.—Alfred Scannel is going into business with his father in Lowell.—Paul A. Esten will return as a private assistant next year.—Paul H. Heimer has a position as assayer with the Enterprise Mining Company, Cooney, New Mexico.—Warren W. Karnan is to be an assistant chemist with the Massachusetts State Board of Health, address Room 502, State House, Boston, Mass.—H. E. Batsford is to enter chemical research work with the Roessler & Hasslacher Chemical Company, Niagara Falls, N.Y.—A. B. Babcock and H. Flaherty will return to the Institute in the fall.—Raymond W. Parlin is going with W. S. Johnson, consulting engineer.—George Schobinger has a position with the Chicago Transit Commission.—C. R. Lamont leaves for Salt Lake City next Saturday. He will engage in mining out there.